Administration Guide

Novell File Reporter 2.6

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Novell

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122 North Laurens St.
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Contents

About This Manual

This administration guide is written to provide network administrators the conceptual and procedural information for administering Novell File Reporter.

Audience

This guide is intended for network administrators who manage user and collaborative network storage resources.

Feedback

We want to hear your comments and suggestions about this guide and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *Novell File Reporter 2.6 Administration Guide*, visit the Novell File Reporter Web site (http://www.novell.com/documentation/filereporter2).

Additional Documentation

For additional Novell File Reporter 2.6 documentation, see the following guides at the Novell File Reporter Web site: (http://www.novell.com/documentation/filereporter2)

- *Novell File Reporter 2.6 Installation Guide*
- *Novell File Reporter 2.6 Database Schema and Custom Queries Guide*

1 What's New

With each product update, Novell File Reporter introduces significant architectural and feature enhancements. Starting with the release of Version 2.0, we have provided a timeline summarizing some of the more notable changes in architecture, performance, and features.

1.1 New in Version 2.6

Baseline and Previous Scans

Previous versions of Novell File Reporter 2 let you keep only the most recent File System and Permissions scans of a storage resource. With the release of Version 2.6, you can now designate a particular scan to be retained as a "Baseline scan" and keep the existing scan as a "Previous scan." This means that you can now retain up to three scans for each storage resource: a Baseline scan, a Previous scan, and a "Current scan." Any combination of two scans are the means of generating new built-in Historic Comparison reports being introduced in Version 2.6.

Historic Comparison Reports

This new built-in report lets you view the changes to a storage resource through a comparison of any two of the following scans: Baseline, Previous, or Current.

Historic Comparison reports include:

- Historic File System Comparison reports
- Historic NCP Permissions Comparison reports
- Historic NTFS Permissions Comparison reports

Custom Query Report Designer Updates

The Custom Query Report Designer has been updated to support views for Previous and Baseline scan data, as well as a number of other updates and bug fixes.

Ability to Delete a Scan Immediately

A scan can be manually deleted immediately, or it can be marked for deletion at the next maintenance interval (by default, currently 12:00 midnight local time).

Ability to Copy a Report Definition

The ability to copy Report Definitions has been added to both the Web Application and the Report Designer. The Web Application is able to copy any report definition type, and the Report Designer is able to copy any Custom Query report definitions.

File Query Cookbook

Coinciding with the release of Novell File Reporter 2.6 is the introduction of a new collaborative community portal for accessing and sharing Custom Query reports. The SQL commands for these reports are included so all that you have to do is simply copy the commands and paste them into the Report Designer. In addition, sample report layouts (`.repx` files) are also included for some reports which can be opened via the Report Designer report layout interface. Both the SQL and the report layouts may be customized as needed. You can access the File Query Cookbook directly through the Report Designer interface, or at http://www.filequerycookbook.com (http://www.filequerycookbook.com).

1.2 New in Version 2.5

Custom Reports through Database Querying

In addition to the built-in report types, you can generate custom reports by crafting your own database query. The report data is extracted from the scan and generated into a report in delimited text format or a custom report layout via the new Report Designer.

Custom Query Report Designer

Custom query report data can be further customized for layout and presentation from a Windows workstation with the Report Designer.

Desktop Report Viewer

Stored reports can now be downloaded and viewed from a Windows workstation with the Report Viewer application.

Early Access to Analytic Tools in Development

The release of Version 2.5 includes early access to analytic features in a new tool set that can be run from a Windows workstation.

1.3 New in Version 2.0.2

Support for Microsoft SQL Server 2012

With the release of Novell File Reporter 2.0.2, supported databases now include both PostgreSQL and Microsoft SQL Server 2012. For procedures on properly configuring a new SQL Server 2012 instance that is compatible with Novell File Reporter, see “Novell File Reporter 2.6 Installation Guide in the *Novell File Reporter 2.0.2 Installation Guide*.”

Configuration Dashboard

A new configuration dashboard is the means of managing the product licensing and sequentially configuring and administering the database, NFR Engine, and Web Application.

Reporting on Administrative Shares

Novell File Reporter can now report on administrative shares in Windows file systems.

Support for Microsoft Server 2012 R2

Novell File Reporter 2.0.2 fully supports Microsoft Server 2012 R2.

1.4 New in Version 2.0.1

Advanced Filtering

With the introduction of Novell File Reporter 2.0.1, you can use advanced filtering capabilities so that your File Data reports include only the data you want. Boolean filtering is available through a new *Filters* tab. For more information, see Appendix A, “Filtering,” on page 125.

Microsoft DFS Namespace Support

Distributed File System (DFS) namespace technology helps Microsoft network administrators group shared folders located on different servers and presents them to users as a virtual tree of folders known as a namespace. Novell File Reporter now presents these namespaces as available storage resources that can be reported on.

1.5 New in Version 2.0

Advanced Architecture

To provide expanded reporting capabilities Novell File Reporter 2.0 was built on a new advanced architecture that supports:

- Simultaneous integration with eDirectory and Active Directory
- An SQL database
- Web-based administration

Easier Configuration and Management

All of the complex DSI installation and configuration tasks have been replaced with a simple installation and configuration wizard. Once installed, all management tasks are performed through a browser-based interface.

New Reporting Capabilities

Novell File Reporter 2.0 has a much stronger tie-in to network directory services. File Reporter 2.0 authenticates to a primary identity system (either eDirectory or Active Directory) and then through a proxy, establishes a connection to the other identity system. You can be connected to one Active Directory domain and many eDirectory trees at the same time.

New Reports

In addition to the extensive file report types in Version 1, Novell File Reporter 2.0 introduces:

- Permissions reports that identify who has access to a particular file or the access rights of a particular user
- Trending reports that show the growth of data on a Novell volume or Windows share over a period of time
- Detail reports that are specific to an individual user, file type, file, and more
- Aggregate reports that report on file and folders located on storage resources in eDirectory and Active Directory

2 Overview

This section provides an understanding of Novell File Reporter, the supported third-party databases, the NFR Engine, and NFR Agents, along with how reports are generated.

2.1 Novell File Reporter

Novell File Reporter inventories network file systems and delivers the detailed file storage intelligence you need to optimize and secure your network for efficiency and compliance. Engineered for enterprise file system reporting, Novell File Reporter gathers data across the millions of files and folders scattered among the various network storage devices that make up your network. Flexible reporting and filtering options then present the exact findings you need so you can demonstrate compliance or take corrective action.

Novell File Reporter identifies files currently stored on the network, the size of the files, when users last accessed or modified the files, and the locations of duplicate files. Novell File Reporter can also help you calculate department or individual storage costs. Novell File Reporter can even identify access rights to folders and consequently, the files that are contained within.

2.2 New Architecture for Version 2

Novell File Reporter 2 is a significant upgrade from Novell File Reporter 1. To provide the new and future capabilities of the product, along with the extensive performance enhancements, Novell File Reporter 2 features:

- A completely new architecture built on rewritten code
- A new reporting framework
- The utilization of a PostgreSQL or Microsoft SQL Server 2012 database
- The NFR Engine with an architecture that is common with Novell Storage Manager
- Integration with eDirectory and Active Directory

IMPORTANT: Because of their distinct architectures, Novell File Reporter Version 1.0.*x* and Version 2.6 cannot be integrated. If you have Novell File Reporter 1.0.*x* deployed in your network and want to keep it, be aware that you cannot import Version 1.0.*x* data to Version 2.6 and vice versa. You must ensure that the Version 1.0.*x* NFR Engine and data reside on servers where no components of Version 2.6 reside.

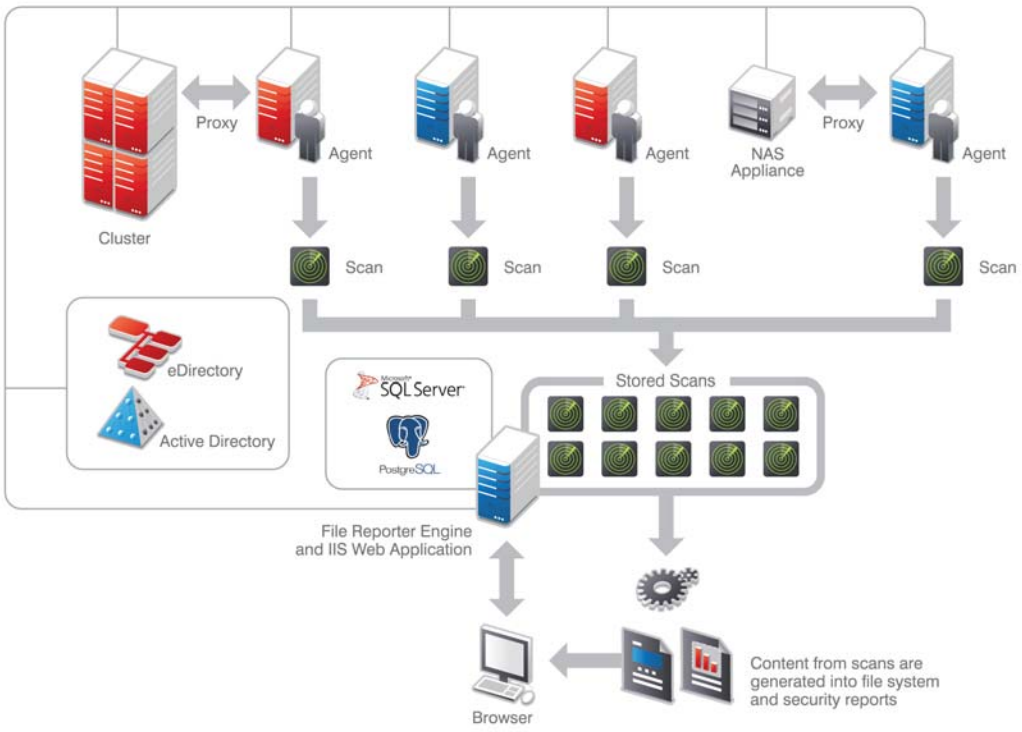
If you decide to install either the Novell File Reporter 2.6 NFR Engine or the NFR Agent on a server where a Novell File Reporter Version 1.0.*x* component is installed, you must fully remove the Version 1.0.*x* component before installing the Version 2.6 component.

2.3 How Novell File Reporter Works

Novell File Reporter was developed to examine and report on terabytes of data—in other words, millions of files, folders and volumes, scattered among the various storage devices that make up your network. This reporting includes the associated rights of these files, folders, and Novell network volumes or Microsoft network shares.

To report on this data efficiently, Novell File Reporter disperses the work among a Web application, NFR Engine, NFR Agents, either a PostgreSQL or Microsoft SQL Server (2012 or later) database, and either eDirectory or Active Directory.

Figure 2-1 *Novell File Reporter Work Process*



2.3.1 Web Application

The Web application runs on top of Microsoft Internet Information Services (IIS) and is the means of all administrative interaction. Among other things, the Web application is responsible for:

- Management of scan policies and report definitions
- Generating Preview reports
- Access to stored reports
- All other management functions

2.3.2 NFR Engine

The NFR Engine is the mechanism that runs Novell File Reporter. It can be hosted on Microsoft Windows Server 2008 R2 SP1, 2012, or 20012 R2. It can also run on a sufficiently enabled 64-bit Windows 7 or Windows 8 workstation.

The NFR Engine does the following:

- Stores scans in the database
- Schedules the scans that the NFR Agents conduct
- Processes the scans and compiles them for inclusion in a report
- Runs scheduled reports
- Manages scan delegations to NFR Agents
- Sends notifications that Novell File Reporter has completed a scan or generated a report

2.3.3 NFR Agents

NFR Agents are compact programs that can run on Novell Open Enterprise Server and Microsoft Windows Server hosts. NFR Agents can examine and report on Novell NSS and Windows NTFS file systems. Additionally, NFR Agents examine and report on file system security, including file and folder rights, trustee assignments, and permissions. For more information, see Appendix D, “NFR Agent Scan Capabilities,” on page 137.

IMPORTANT: For optimal results, you should install an NFR Agent on every server that has a volume or share you want to report on.

NFR Agents cannot be installed on NAS devices or clustered hardware devices. For Novell File Reporter to report on these type of devices, NFR Agents can be set up as proxy agents.

2.3.4 Database

The database stores information needed for generating reports. This information includes:

- Cached Active Directory and eDirectory objects
- Scans
- Identity system information such as names of eDirectory trees and Active Directory domains and forests
- Schedule information pertaining to scans and reports
- Notification information

- Report definitions
- Scan history
- Scan policies
- Volume free space

2.3.5 Scans

Through the NFR Agent, Novell File Reporter takes a “scan” of the file system’s storage resource at a given moment. A storage resource can be a Novell network server volume or a Microsoft network share.

Scans are indexed data that are specific to a storage resource. They are the means of generating a storage report. Scans include comprehensive information on the file types users are storing, when files were created, when they were last modified, permission data on the folders where these files reside, and much more.

Novell File Reporter collects scans from the NFR Agents, compresses them, and sends them to the NFR Engine, where it then decompresses them and stores the scan information into the database.

You can conduct scans at any time, but we recommend using a scheduled time after normal business hours to minimize the effect on network performance.

NOTE: Procedures for performing scans are documented in Chapter 5, “Scheduling and Performing Scans,” on page 39.

2.3.6 Reports

When Novell File Reporter has a scan of a storage resource, you can utilize it to generate a report. You can generate reports through the following means:

- Built-in Reports
- Custom Queries

Built-in Reports

Generating a built-in report is as simple as selecting the report type from a menu.

To generate a report, the NFR Engine takes all of the needed scans that are applicable to the specifications of the report and consolidates them into a single report by indexing the applicable scans.

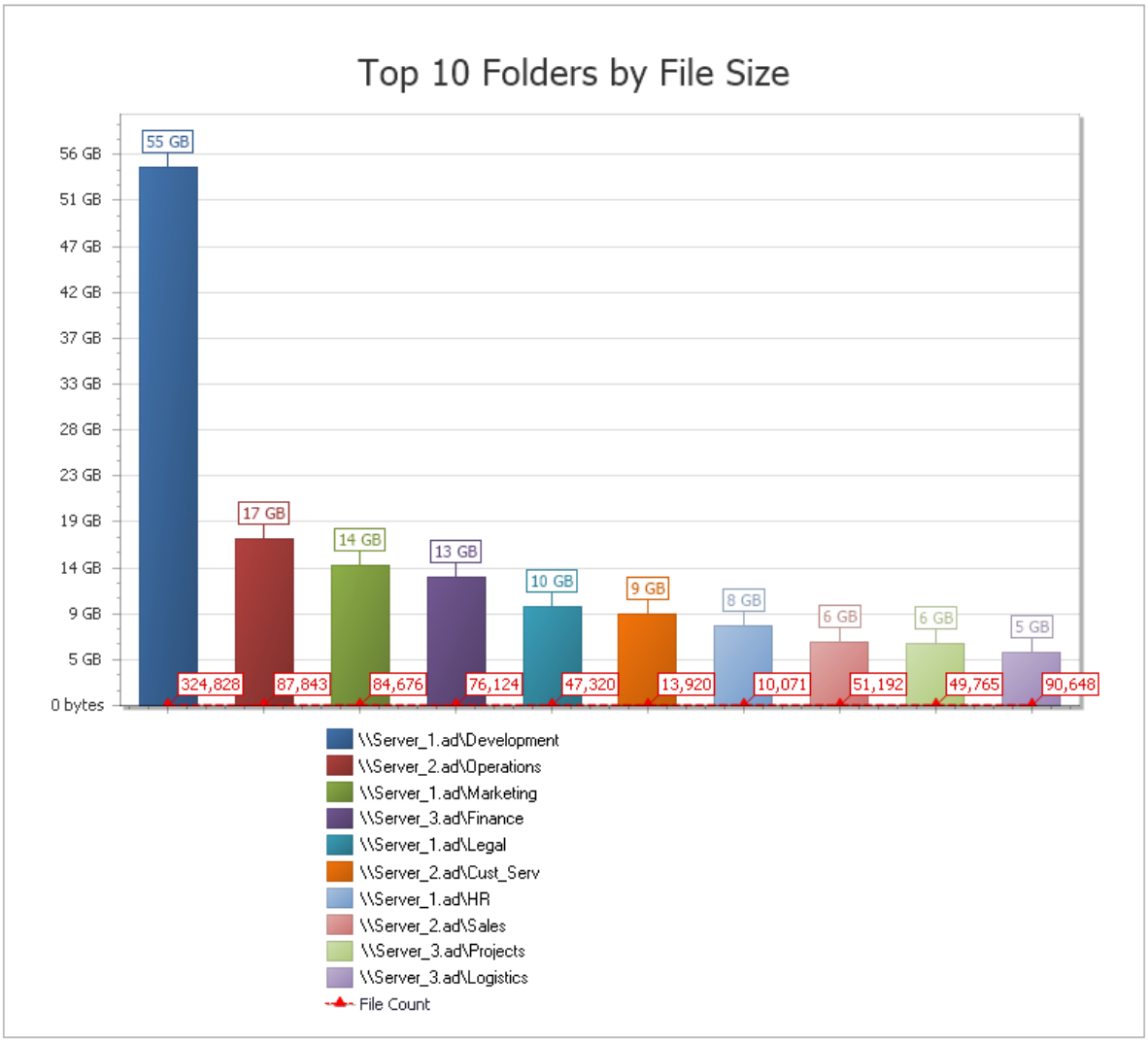
Table 2-1 *Built-in Report Types*

File System Reports	Security Reports	Trending Reports
Folder Summary	Assigned NCP Permissions	Volume Free Space
Detail Reports	Assigned NTFS Permissions	
File Extension	Permissions by Path	
Duplicate Files	Permissions by Identity	

File System Reports	Security Reports	Trending Reports
Date-Age	Historic NCP Permissions Comparison	
Owner	Historic NTFS Permissions Comparison	
Storage Cost		
Comparison		
Directory Quota		
Historic File System Comparison		

Novell File Reporter lets you present built-in reports in various formats including PDF, Microsoft Excel, RTF, HTML, TXT, and CSV. The product also includes built-in graphs for certain report types.

Figure 2-2 *Sample Report in Graphical Format*

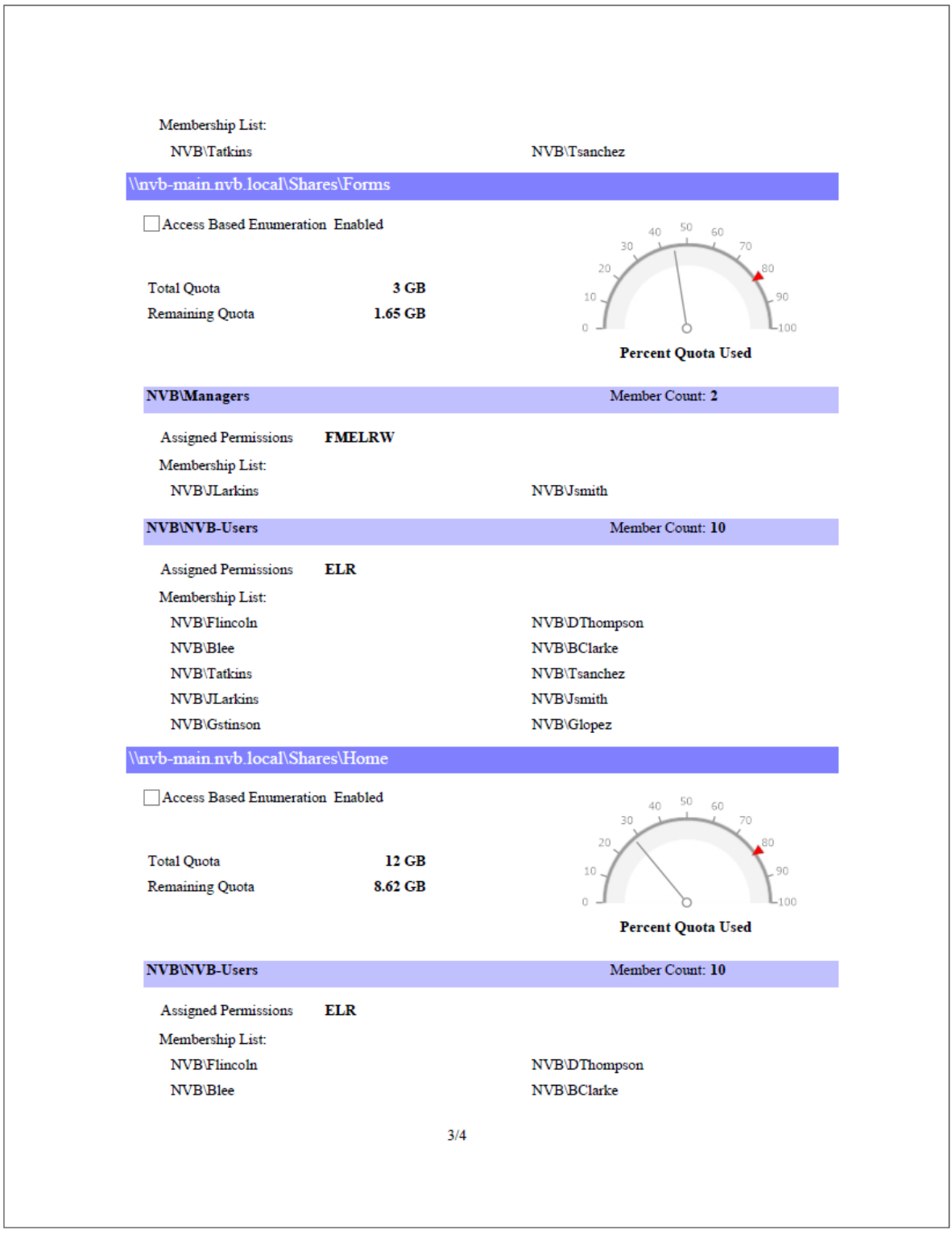


Custom Queries

These reports allow administrators who are familiar with querying the database to generate very specific report data that might not be available through one of the built-in report types.

Custom query report data can be further customized for layout and presentation from a Windows workstation with the Report Designer.

Figure 2-3 *Page from a Custom Query Report Designed with the Report Designer.*



Membership List:

NVB\Tatkins NVB\Tsanchez

\\nvb-main.nvb.local\Shares\Forms

☐ Access Based Enumeration Enabled

Total Quota	**3 GB**
Remaining Quota	**1.65 GB**

Percent Quota Used

NVB\Managers Member Count: **2**

Assigned Permissions **FMELRW**

Membership List:

NVB\JLarkins NVB\Jsmith

NVB\NVB-Users Member Count: **10**

Assigned Permissions **ELR**

Membership List:

NVB\Flincoln	NVB\DThompson
NVB\Blee	NVB\BClarke
NVB\Tatkins	NVB\Tsanchez
NVB\JLarkins	NVB\Jsmith
NVB\Gstinson	NVB\Glopez

\\nvb-main.nvb.local\Shares\Home

☐ Access Based Enumeration Enabled

Total Quota	**12 GB**
Remaining Quota	**8.62 GB**

Percent Quota Used

NVB\NVB-Users Member Count: **10**

Assigned Permissions **ELR**

Membership List:

NVB\Flincoln	NVB\DThompson
NVB\Blee	NVB\BClarke

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3 The Administrative Interface

3.1 Supported Browsers

Novell File Reporter is managed through a Web browser-based interface and is supported on the latest versions of the following browsers:

Table 3-1 *Supported Browsers*

Windows	Linux	Mac OS X
Internet Explorer 10	Firefox	Firefox
Internet Explorer 11		Chrome
Firefox		Safari
Chrome		

3.2 Launching the Administrative Interface

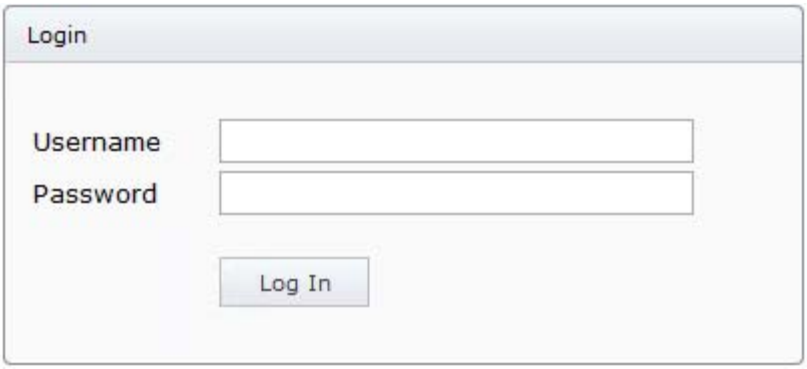
1 In the browser’s address bar, type:

`https://`*`nfr_web_server_dns_name`*

The DNS name is the one you created in “Novell File Reporter 2.6 Installation Guide.”

You must enter the DNS name. You cannot log in with an IP address.

The login screen appears.



2 Enter the username and password of a member of the NFR Admins group that you created and click *Log In*.

If you are authenticating to Active Directory, the username can be entered in any of the standard Active Directory formats:

domain\SAMAccountName (AD\User1)

UPN(user1@ad.test.lab)

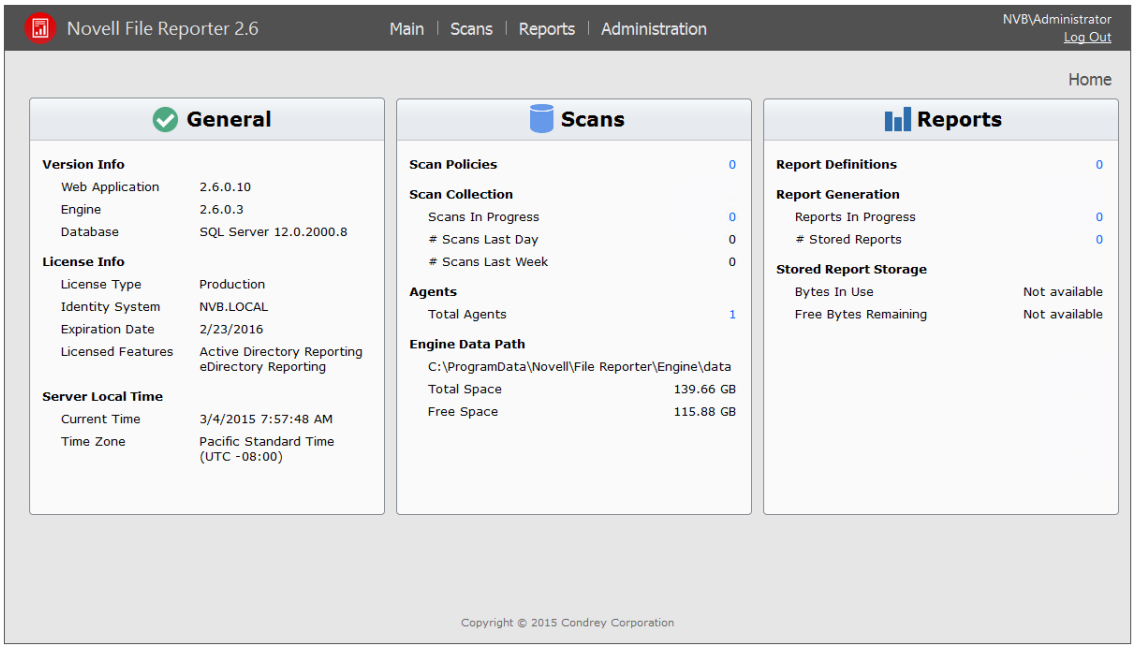
LDAP(CN=user1,OU=home,DC=ad,DC=test,DC=lab)

With LDAP, there may be partial case sensitivity, especially with the domain (DC=) components.

If you are authenticating to eDirectory, the username must be entered in typeless FDN:

admin.novell

The Novell File Reporter Home page appears:



3.3 Using the Administrative Interface

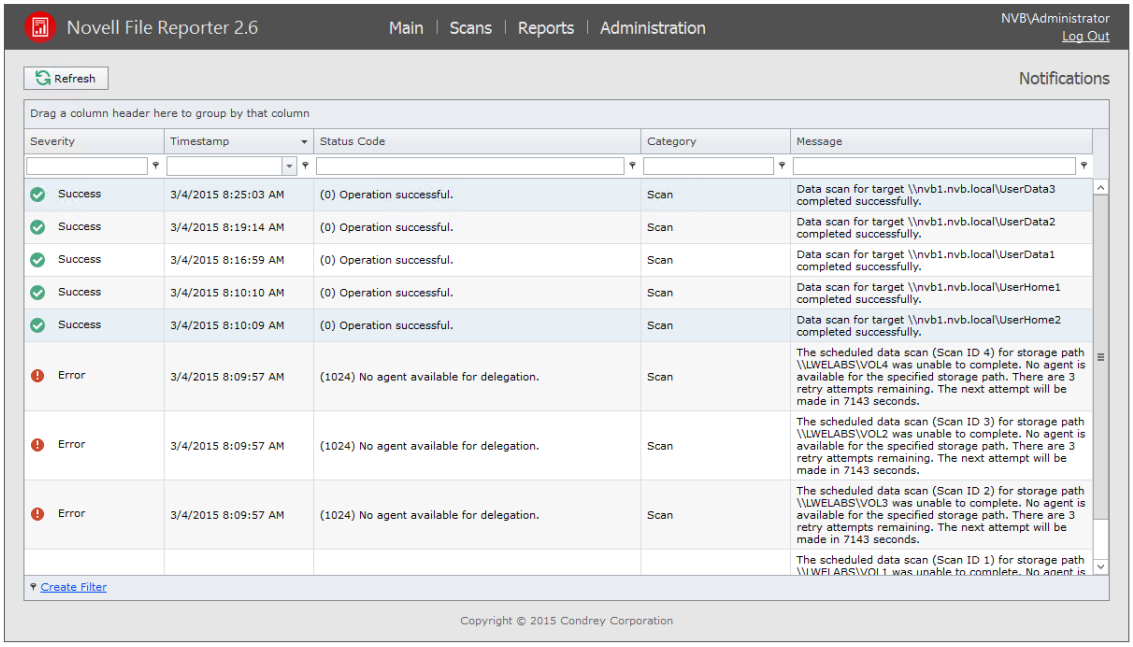
All tasks are conducted by selecting an option from one of the menus at the top of the page.

The *Main* menu provides access to notifications and system information. The *Web Interface Configuration* option in the *Administration* menu lets you set your preference for entries listed on a page.

3.3.1 Viewing Notifications

Novell File Reporter displays notifications for successfully completed scans, failed scans, completed reports, failed reports, errors, warnings, and other information. You can use the filtering options to list only the notification types you want.

1 From the *Main* menu, select *Notifications*.



Like many pages in the administrative interface, you can modify the current display.

2 (Optional) Display columns in the order you want by dragging them to the desired location.

3 (Optional) List the most recent notification by clicking twice the column heading.

4 (Optional) Filter the notifications to display only the information you want:

4a At the desired column heading, click the “pin” icon.

For example, the Message column.

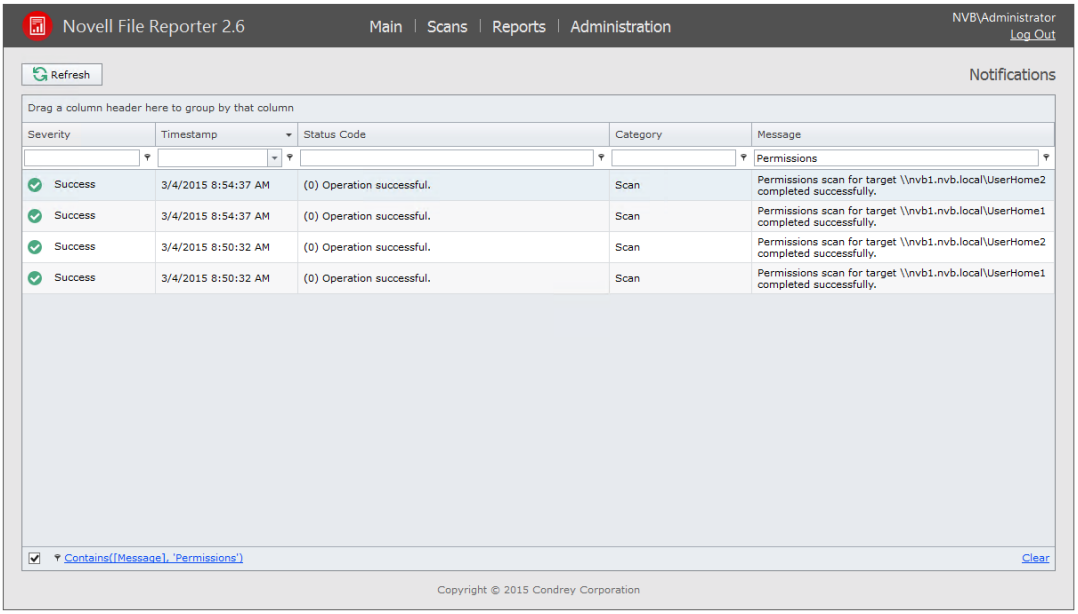
4b Select the desired filter option.

For example, *Contains*.

4c In the field to the left of the “pin” icon, enter the distinguishing word or letter for the filter.

For example, `Permissions`.

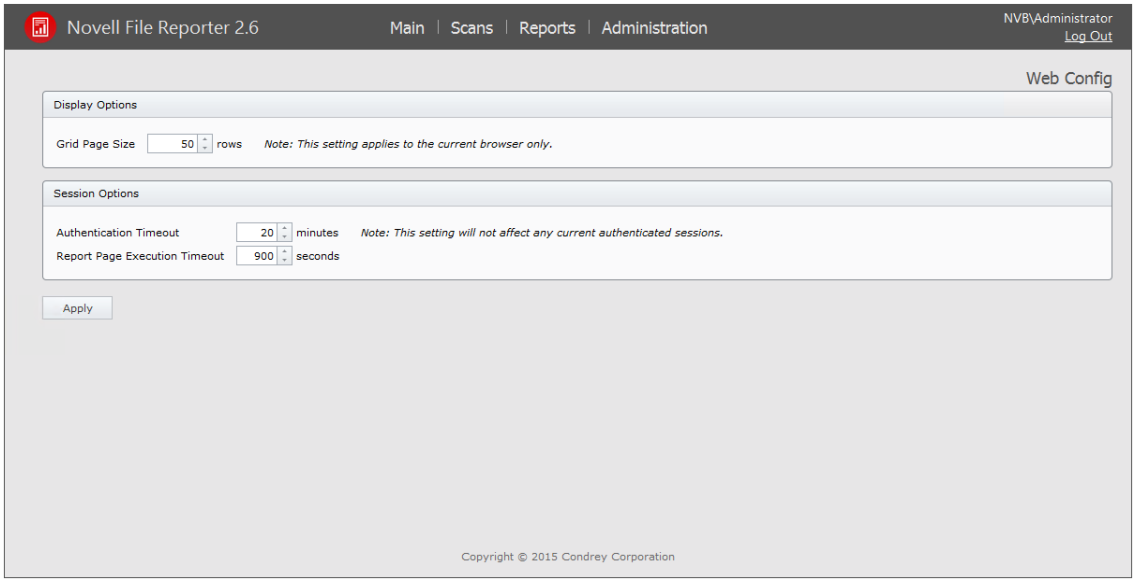
The page is updated according to the filtering parameters.



3.3.2 Configuring the Web Interface

After 20 minutes of inactivity in the administrative interface, you are required to log in again. You can adjust this setting and specify the number of items displayed per page through the Web Config page.

1 From the *Administration* menu, select *Web Interface Configuration*.



2 In the *Grid Page Size* field, specify the number of entries you want displayed.

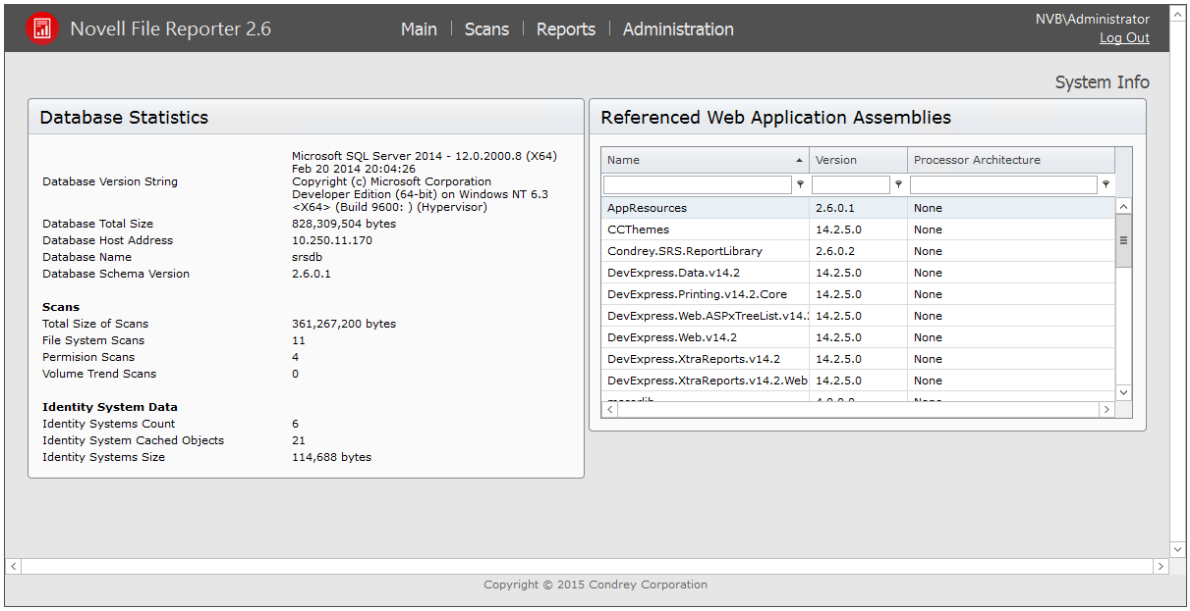
3 In the *Authentication Timeout* field, specify the minutes of inactivity before you will need to log in again.

4 Click *Apply*.

5 When you are notified that the Web interface configuration was saved, click *OK*.

3.3.3 Viewing System Information

When you work with a Novell Support representative to diagnose the source of a problem, you might be asked to access the System Info page. To do so, simply select *System Info* from the *Main* menu.



NOTE: The layout and content displayed in the System Info page varies between environments utilizing a PostgreSQL database and Microsoft SQL Server.

4 Performing Setup Procedures

Before you can start scanning storage resources and generating reports, you first need to perform some setup procedures.

4.1 Enabling Other Identity Systems

During the installation of the NFR Engine, you specify the primary identity system (directory service) when you load the Novell File Reporter license file. If the Novell File Reporter license file is for Active Directory, then Active Directory is the primary identity system. If the license file is for eDirectory, then eDirectory is the primary identity system.

Novell File Reporter lets you enable other identity systems so that you can scan and report on the storage resources that are within those systems.

- Section 4.1.1, “Enabling eDirectory,” on page 27
- Section 4.1.2, “Enabling Active Directory,” on page 29

4.1.1 Enabling eDirectory

Novell File Reporter allows you to enable multiple eDirectory trees as identity systems.

IMPORTANT: If you have Universal Passwords set up for all users in your tree, you must have the proper settings for Novell File Reporter to work. Refer to “Novell File Reporter 2.6 Installation Guide” for more information.

IMPORTANT: If your primary identity system is Active Directory and you want to enable eDirectory, you must first install the Novell Client on the Windows server that is hosting the NFR Engine.

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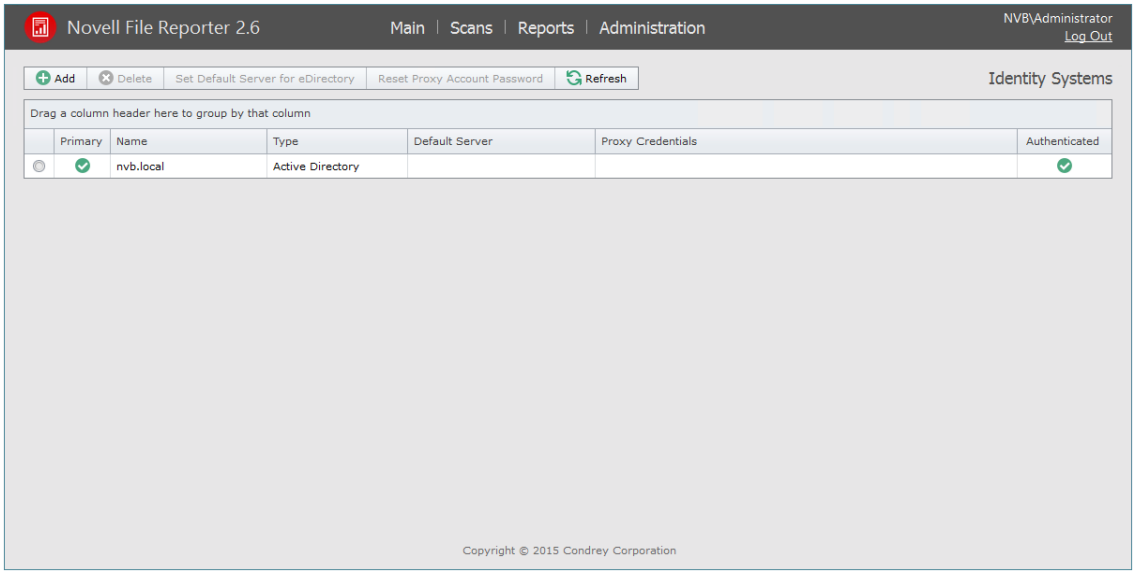
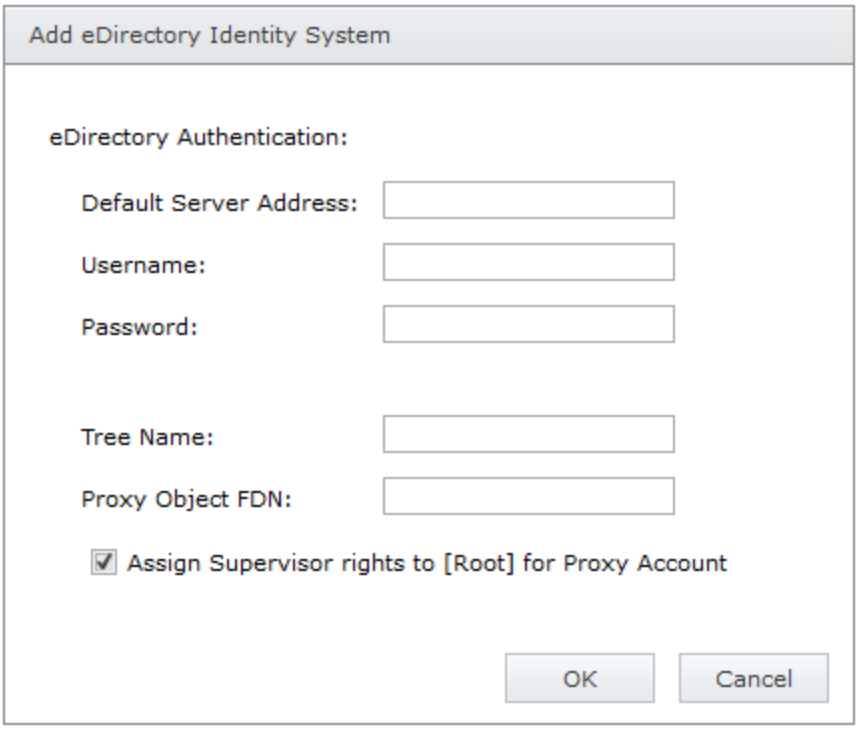
1 Select *Administration* > *Identity Systems.*



2 Click *Add*.



Default Server Address: Specify the IP address of any server in the directory tree.

Username: Use typeless FDN format naming to specify an administrator name.

Password: Specify the administrator password.

Tree Name: Specify the name of the eDirectory tree.

Proxy Object FDN: Use typeless FDN format naming to specify a name for the proxy object that you are creating.

For example, `NFRProxyObject.system`

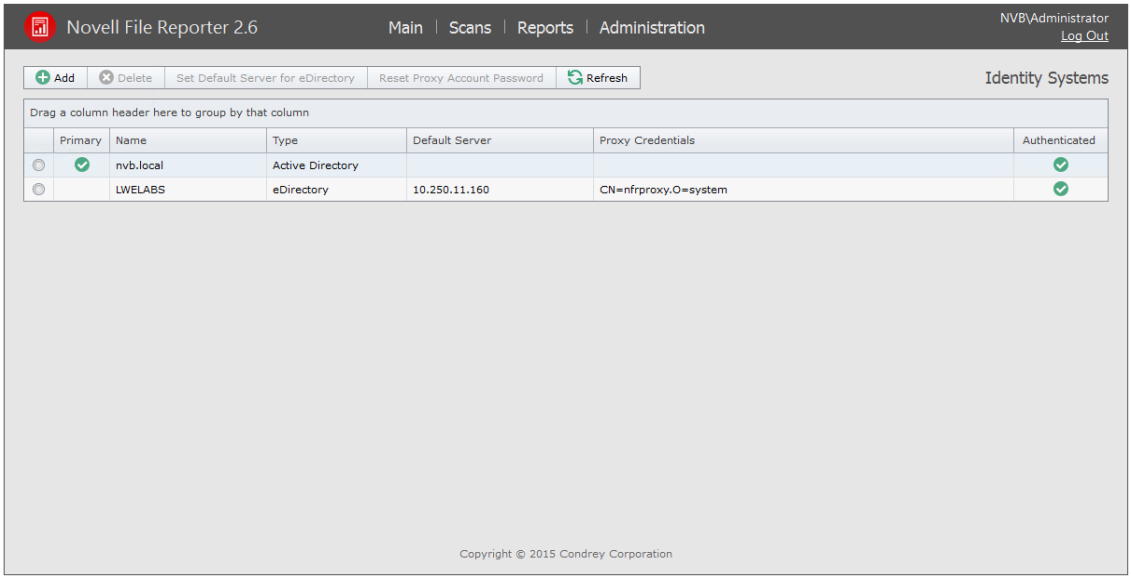
Assign Supervisor rights to [Root] for Proxy Account: Leaving this check box selected enables Novell File Reporter to scan all volumes in the directory tree. If you deselect this option, the NFR Agent can scan only those volumes to which the NFR proxy object has been given supervisor rights.

When this option is deselected, storage resources might not build properly.

We therefore recommend that this option remain selected.

3 Complete the fields and click *OK*.

The eDirectory identity system is added.

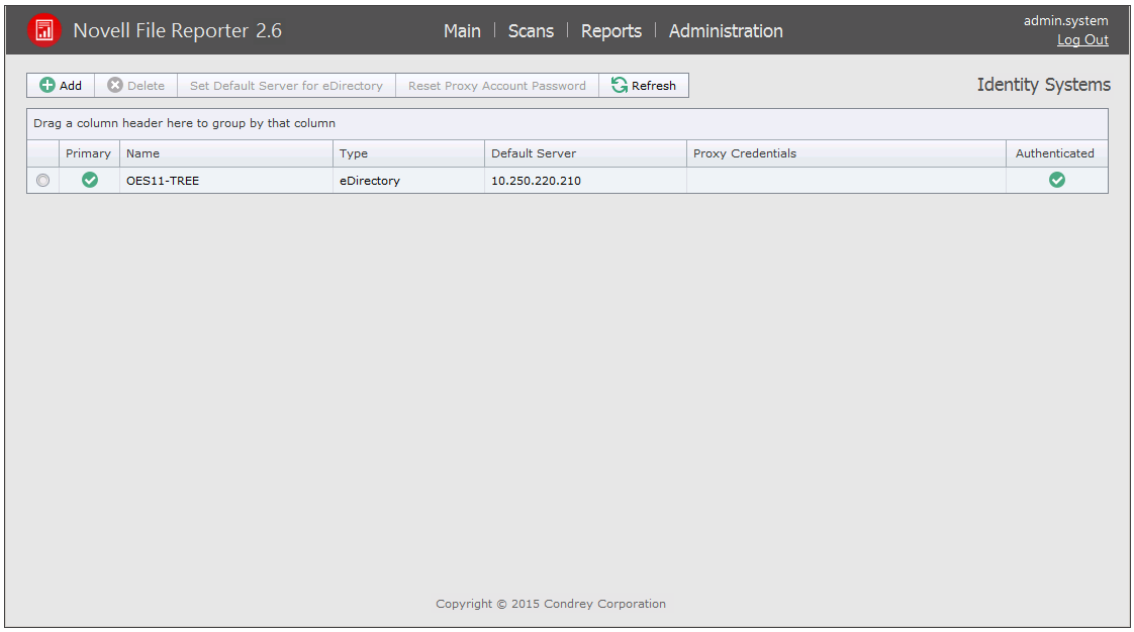


4 (Optional) Repeat these steps to add additional eDirectory identity systems.

4.1.2 Enabling Active Directory

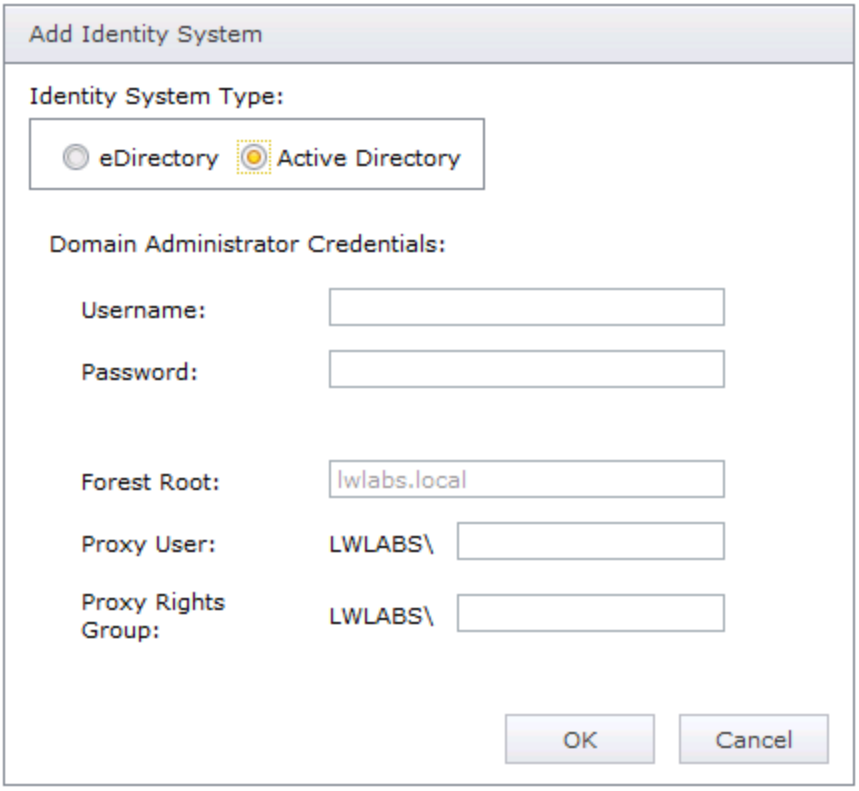
Novell File Reporter 2.6 allows you to enable only one Active Directory forest as an identity system.

1 Select *Administration* > *Identity Systems*.



2 Click *Add*.

3 In the *Identity System* region, click the *Active Directory* option.



Username: Specify a username for an administrator in Active Directory.

Password: Specify the password for the administrator.

Forest Root: Because the Windows NFR Engine host server is already part of a domain, the forest name is entered automatically.

Proxy User: Name the proxy user.

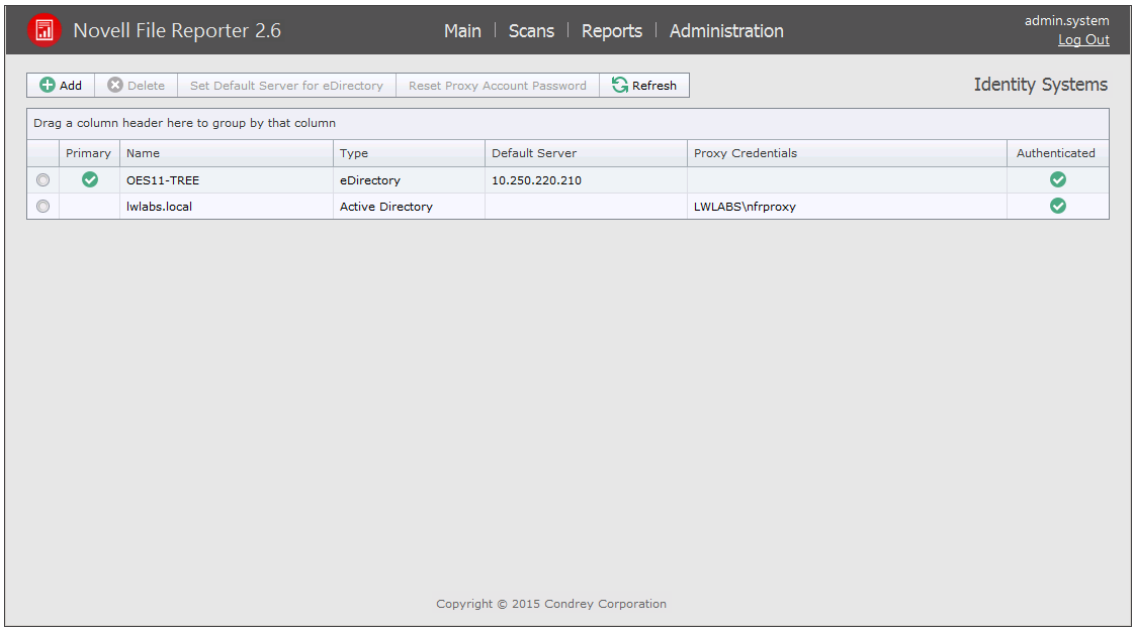
For example, `NFRProxy`.

Proxy Rights Group: Name the proxy rights group.

For example, `NFRProxyRights`.

4 Click *OK*.

The Active Directory identity system is added.

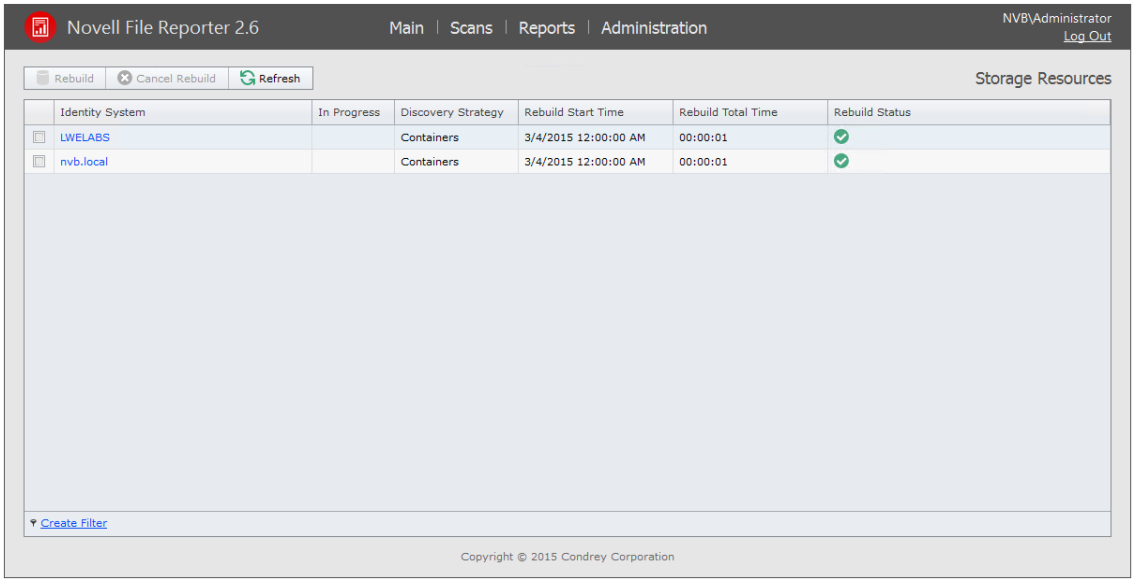


4.2 Viewing Storage Resources

When an identity system has been enabled, the associated storage resources, which include Novell volumes and Microsoft shares, are available for scanning and reporting.

Novell File Reporter cannot see a Windows network disk drive that is not shared.

1 Select *Administration* > *Storage Resources*.

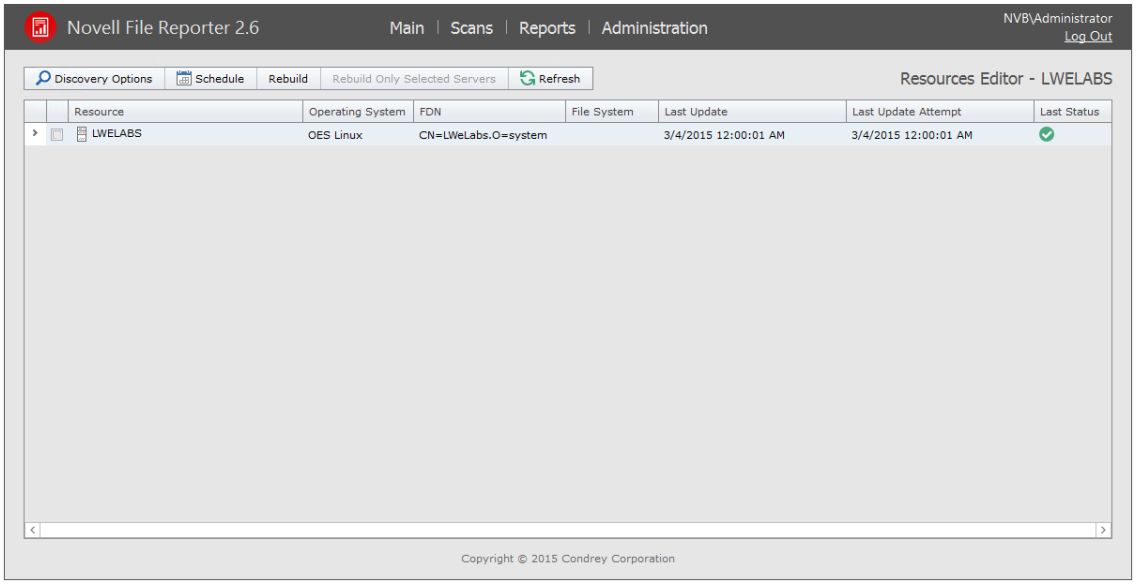


2 Select a check box pertaining to one of the listed eDirectory trees or Active Directory forests.

The *Rebuild* button is enabled, allowing you to rebuild the storage resources for the selected eDirectory tree or Active Directory forest. You should rebuild the storage resources whenever you add a new server.

3 (Optional) Click *Rebuild* to rebuild the storage resources for the eDirectory tree or Active Directory forest.

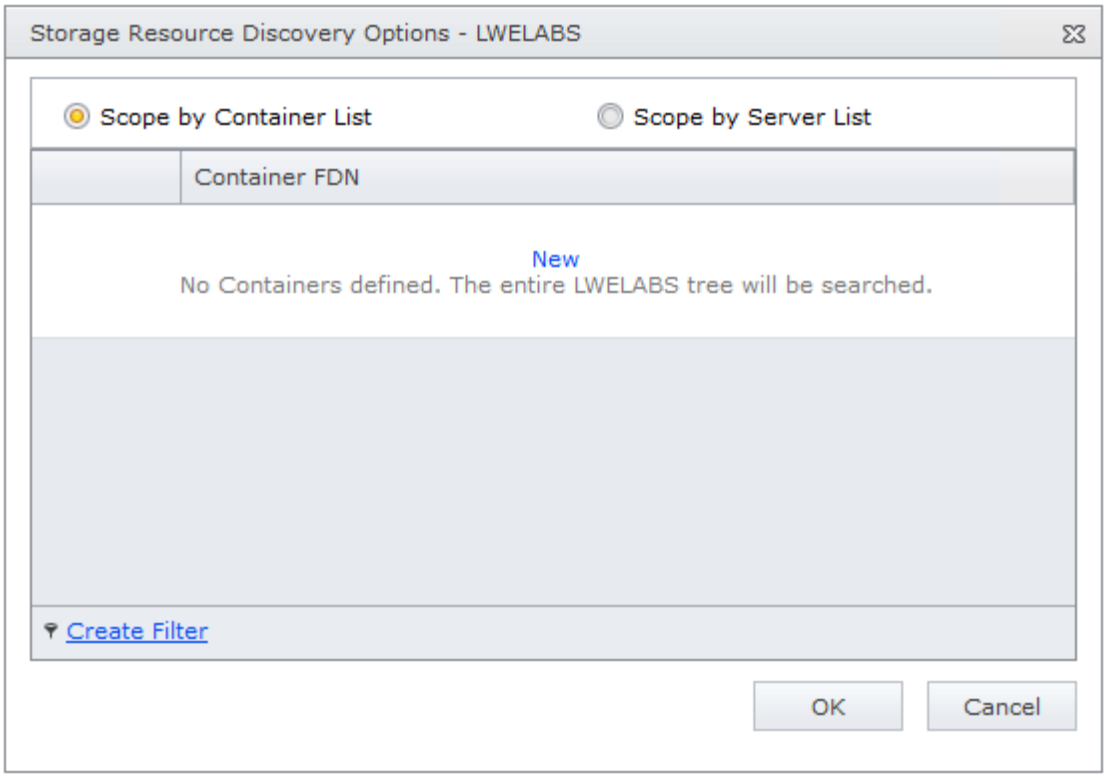
4 Click one of the listed eDirectory trees or Active Directory forests.



All of the servers in the selected eDirectory tree or Active Directory forest are displayed.

5 Click each button to view options.

Discovery Options: For large organizations with eDirectory trees or Active Directory forests spanning multiple geographic areas, rebuilding the storage resources can take many hours. Rather than rebuilding the storage resources for the identity system, you can select this to create a scope that specifies just those new containers or servers that need added.



Select whether to specify the servers through a container FDN or server FDN, then click *New* to enter the paths. Specify the FDN path and click *Update*. When all of the paths you want to be searched are listed, click *OK*.

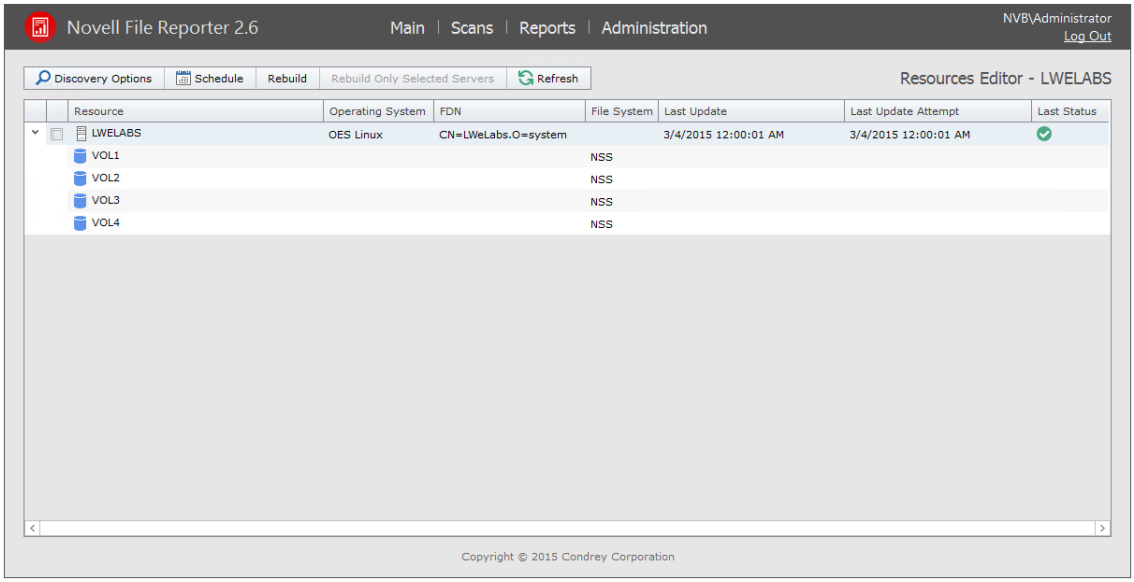
Schedule: By default, Novell File Reporter rebuilds the identity system's storage resources at 12:00 AM each day. Larger sites might want change this setting to weekly or on a specific day of the month. To do so, click this option and modify the settings in the dialog box.

Rebuild: Clicking this button automatically rebuilds the identity system's storage resources.

Rebuild Only Selected Servers: Use this option to rebuild the selected servers.

Refresh: Refreshes the resource list.

6 Click the > for each server to browse the storage resources.

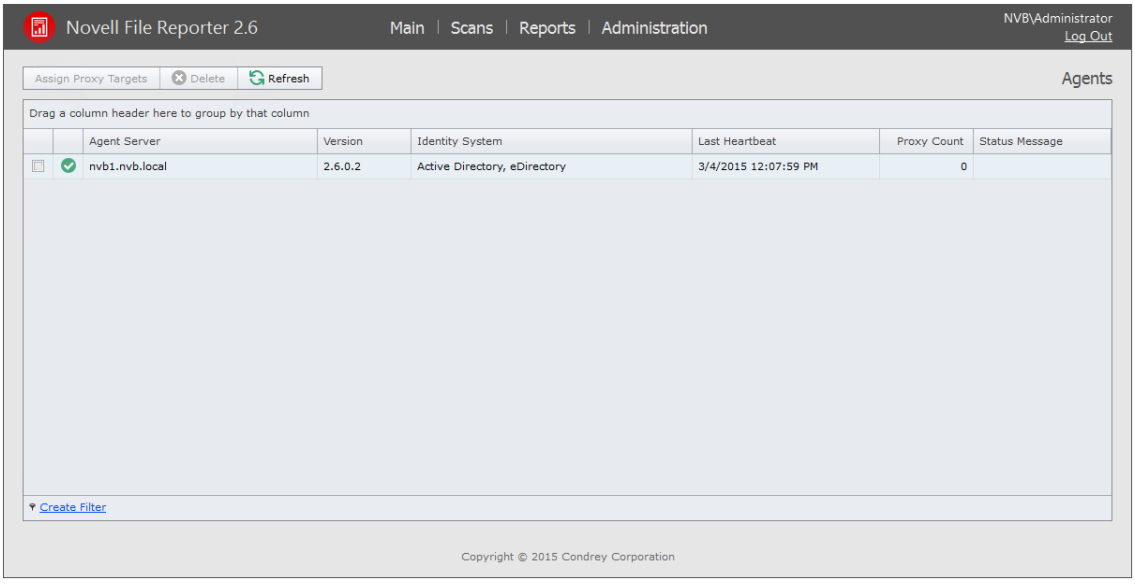


4.3 Assigning Proxy Targets

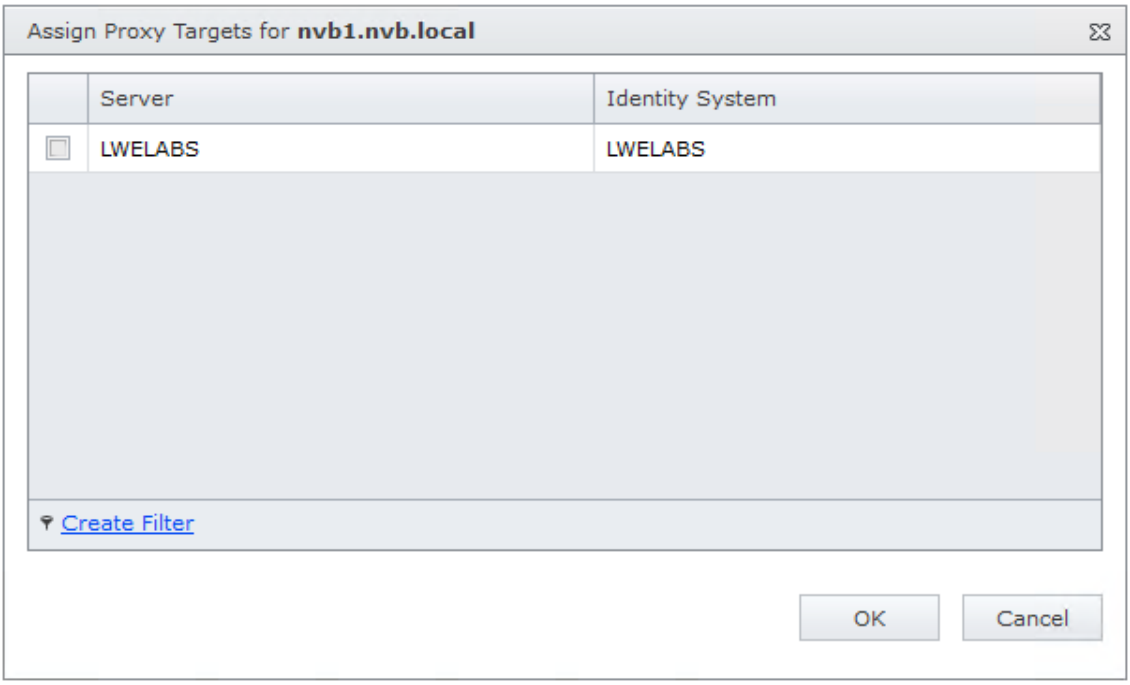
Novell File Reporter does not include a NetWare NFR Agent. Furthermore, an NFR Agent cannot be deployed on a NAS device or server cluster. Finally, some organizations might not want NFR Agents deployed on every server. In situations such as these, you can have a deployed NFR Agent on another server function as a proxy agent.

1 Select *Administration* > *Agents*.

All of the NFR Agents are listed.



2 Select the NFR Agent you want to set up as a proxy agent and click *Assign Proxy Targets*.

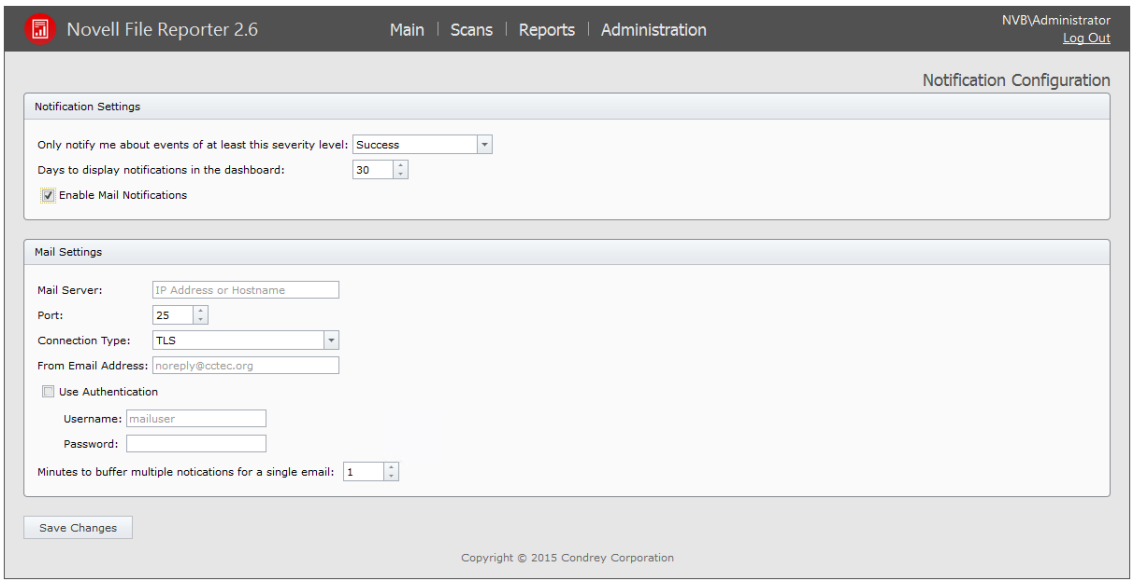


3 Select the proxy targets and click *OK*.

4.4 Configuring Notifications

Notification parameters specify what types of notifications are listed and how email notifications are sent.

1 Select *Administration* > *Notification Configuration*.



Only notify me about events of at least this severity level: This field lets you specify the severity level of events that are recorded and displayed in the Notifications page and through email notifications.

The severity levels are listed from lowest to highest, with *Success* being the default setting.

If you change the severity level, Novell File Reporter records and displays only the events for that severity level and higher. Older notifications from formerly recorded severity levels continue to be displayed in the Notifications page. For example, if you change the setting from *Success* to *Warning*, only warning and error events are recorded, but the formerly recorded success and info events are still displayed, unless you filter them out.

To avoid receiving emails for every successful event, you should modify this setting to a more restrictive level.

Days to display notifications in the dashboard: This field indicates the number of days an event is listed in the Notifications page.

Enable Mail Notifications: Clicking this activates the fields in the *Mail Settings* region of the page.

Mail Server: Specify the IP address or hostname of the mail server to use for sending the email notifications.

Port: Specify the port number used by the mail server.

Connection Type: Specify the encryption type used by the mail server.

From Email Address: Specify the address you want displayed in the *From* field of the email notifications that are sent.

Use Authentication: If your mail server requires authentication, select this.

Username: Specify the mail server username.

Password: Specify the mail server password.

Minutes to buffer multiple notifications in a single email: Novell File Reporter can consolidate messages into a single email notification. If you change this setting to 5, Novell File Reporter consolidates all of the events that took place in 5 minutes and emails you a notification.

2 Specify your notification parameters and click *Save Changes*.

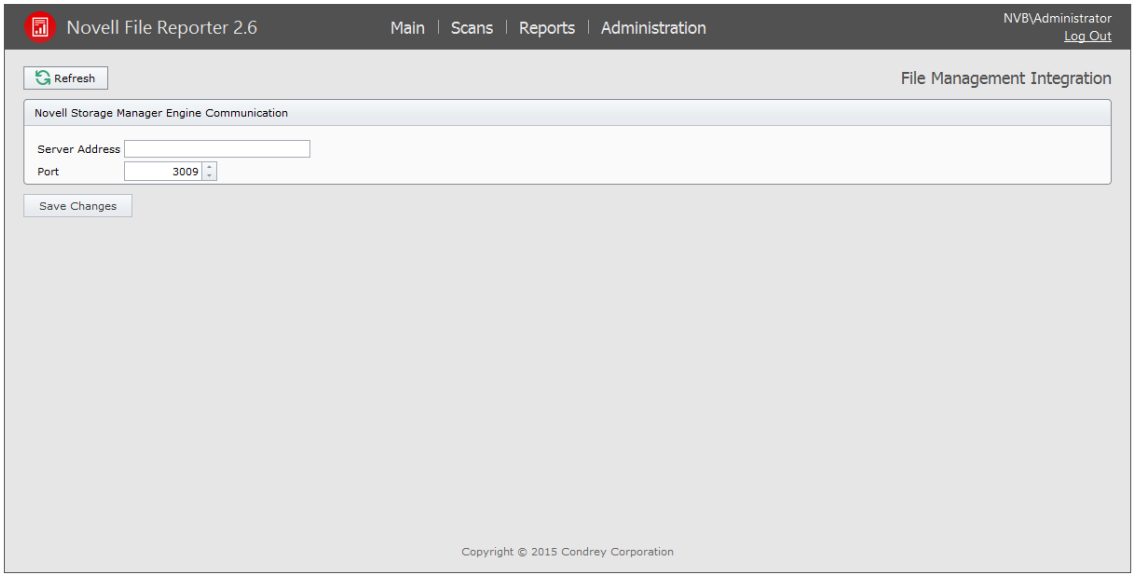
4.5 Integrating with Novell Storage Manager

If you have Novell Storage Manager deployed, you can use Novell File Reporter to report on Novell Storage Manager policies. Before you can do so, you must first specify the server address and port number of the server hosting the NSM Engine.

IMPORTANT: Novell File Reporter 2.6 requires that you upgrade to Novell Storage Manager 3.1 or above.

---

1 Select *Administration* > *File Management Integration*.



2 Specify the IP address or DNS name of the server hosting the NSM Engine.

3 Specify the port number that the NSM Engine is using.

   The default port number is 3009.

4 Click *Save Changes*.

5 Scheduling and Performing Scans

5.1 Scans

Through the NFR Agent, Novell File Reporter takes a “scan” of the file system’s storage resource at a given moment. A storage resource can be a Novell network server volume or Microsoft network share.

Scans are indexed data that are specific to a storage resource. They are the means of generating a storage report. Scans include comprehensive information on the file types users are storing, when files were created, when they were last modified, permission data on the folders where these files reside, and much more.

Novell File Reporter collects scans from the NFR Agents, compresses them, and sends them to the NFR Engine, where it stores them in the database.

Scans can be taken at any time, but we recommend using a scheduled time after normal business hours to minimize the effect on network performance.

You should consider a number of factors as you decide how often to conduct a scan:

- Although daily scanning always provides the most up-to-date information, scanning is not throttled and may place a considerable load on the server hosting the NFR Agent.
- Most storage resources do not change rapidly enough to justify daily scanning.
- Monthly scanning places the least total load on individual servers and on the network, but scans are not as up-to-date as they could be.

- You can scan frequently changing volumes more often and scan the more static volumes less often.
- Part of the decision concerning scanning frequency involves the primary purpose of the reporting. Reporting on storage trending can generally use less frequent scans, but reporting that is intended to solve immediate problems, such as “Who filled up this volume?” needs more frequent scans.
- When information is needed immediately, you can manually trigger a scan.
- For installations where you are not sure of the optimal scanning frequency, you can start with weekly scanning, and then adjust that interval based on the needs of the particular site.

5.1.1 Scan Retention

By default, Novell File Reporter only retains the most current File System scan and Permissions scan of a storage resource. However, if you want to generate Historic Comparison reports, which let you compare two scans of the same storage resource over two points in time, you will need to specify that scans be retained. Depending on the retained scan type, this is done either manually or automatically.

Manual Retention

You can specify that a File System or Permissions scan be retained indefinitely as a “Baseline scan” by manually specifying it in the Scan Data page. For procedures and more information on Baseline scans, see Section 5.5, “Establishing a Baseline Scan,” on page 46.

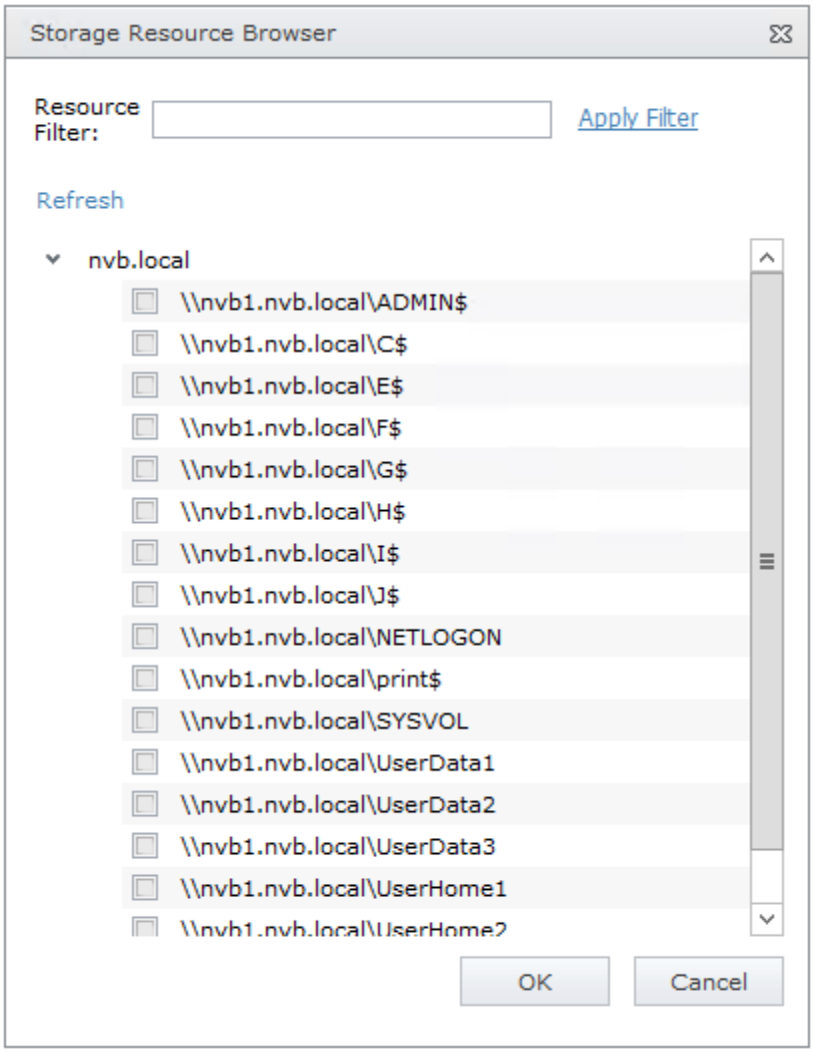
Automatic Retention

Within the scan policy, you can specify that the last File System scan or Permissions scan be retained when a new File System scan or Permissions scan is conducted. This version is known as a “Previous scan.” For procedures and more information on Previous scans, see Section 5.4, “Creating Scan Policies,” on page 42.

5.2 Adding a Scan Target

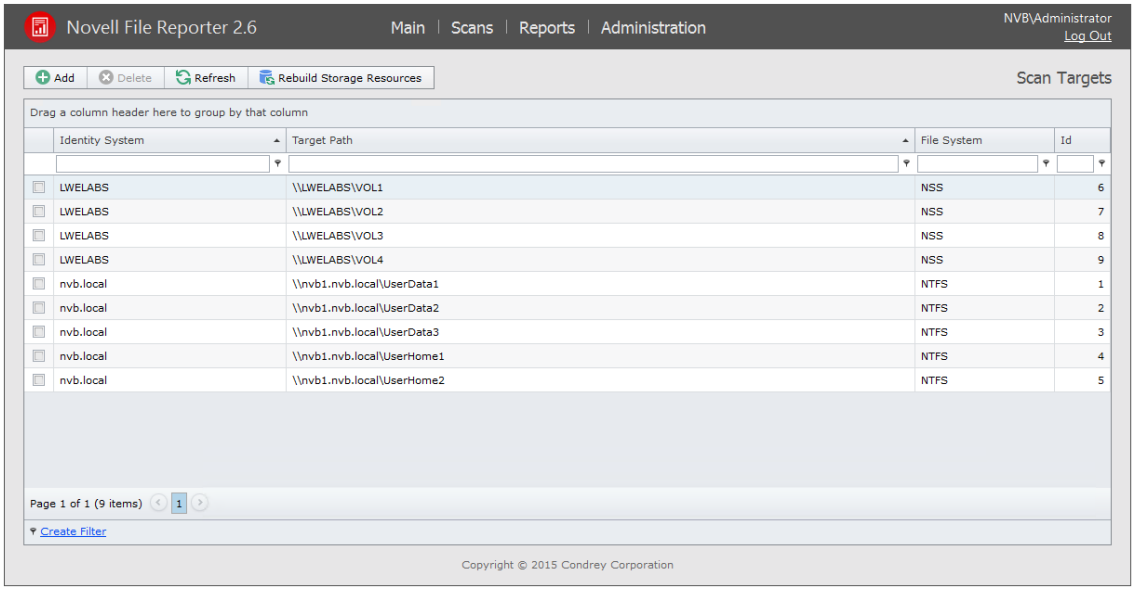
All volumes and shares must first be specified as a scan target before they can be scanned.

1. Select *Scans* > *Scan Targets*.
2. Click *Add*.
3. Click the > to view the volumes and shares of the listed servers.



4 Select the volumes and shares you want Novell File Reporter to be able to scan and click *OK*.

The scan targets are added.



5.3 Removing a Scan Target

1. Select *Scans* > *Scan Targets*.
2. Select the check box pertaining to the volume or share you want to remove as a scan target and click *Delete*.
3. When the confirmation dialog box appears, click *Yes*.

5.4 Creating Scan Policies

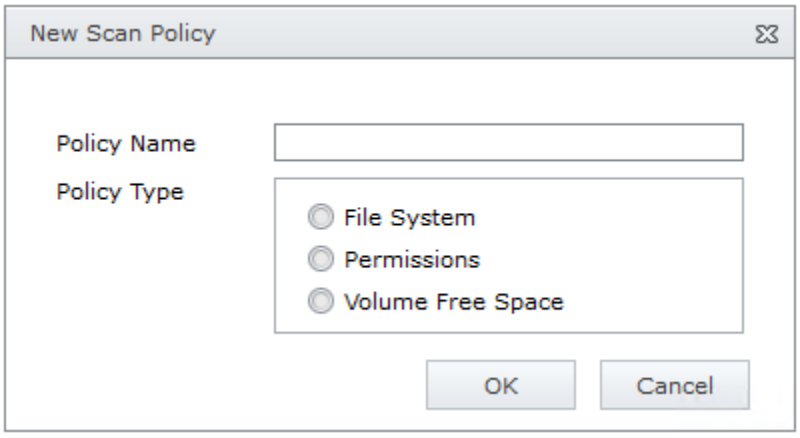
The specifications for a scan are established in a scan policy. The scan policy specifies the following parameters:

- What type of scan to conduct (File System, Permissions, or Volume Free Space)
- The scan targets
- Scan retry settings
- The scan schedule

IMPORTANT: The scan policy name must be unique. If you attempt to give the scan policy an existing name, Novell File Reporter generates an error.

---

1. Select *Scans* > *Scan Policies*.
2. Click *Add*.



3 In the *Scan Policy Name* field, specify a name for the scan policy.

You can provide a description of the policy in the next dialog box.

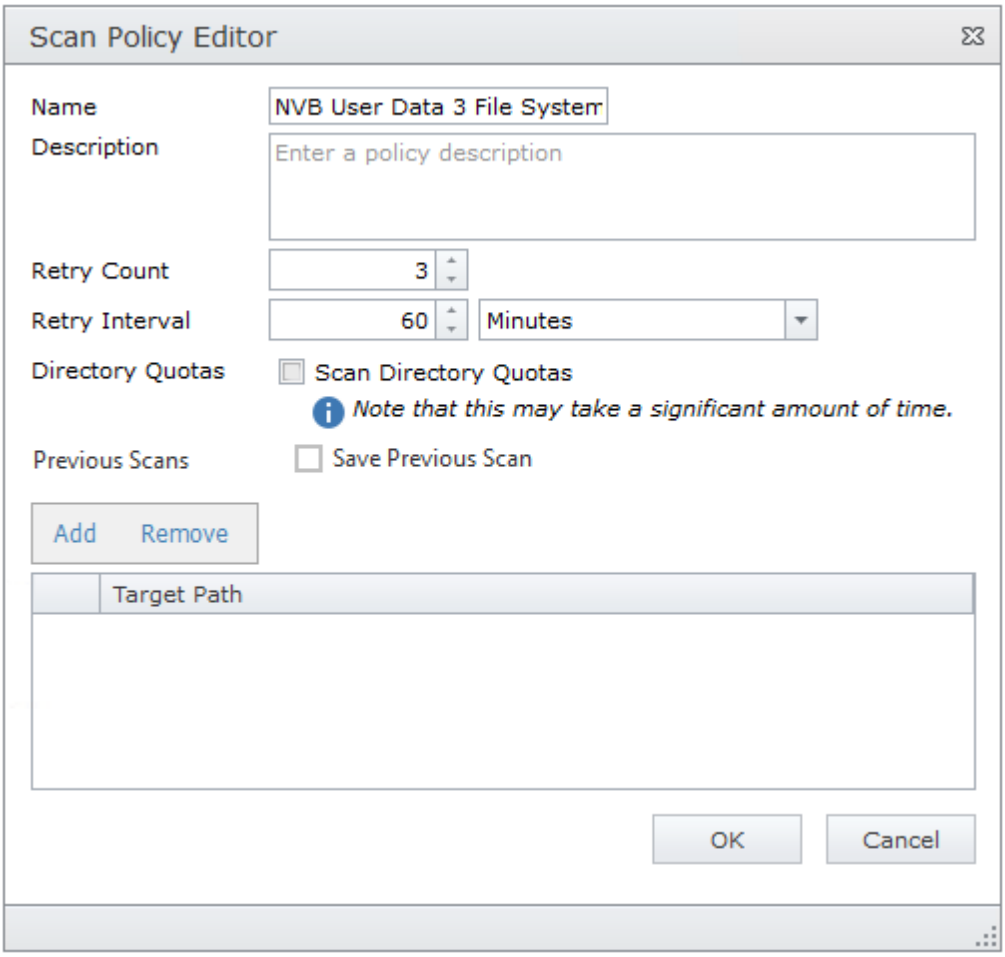
4 Select the type of scan that Novell File Reporter is to conduct.

File System: Scans the files currently stored on the network volume or share, the size of those files, when the files were last accessed, the locations of duplicate versions, and so forth.

Permissions: Scans the rights, trustee assignments, and permissions pertaining to the folders stored on the volumes or shares.

Volume Free Space: Scans the availability of free space on the volumes or shares.

5 Click *OK*.



Name: Displays the name of the scan policy.

Description: Specify a description of the scan policy in this field.

Retry Count: Specify the number of times Novell File Reporter attempts to scan the storage resource targets listed in the scan policy if there is a failure.

Retry Interval: Specify the amount of time before Novell File Reporter retries scanning the storage resource targets listed in the scan policy if there is a failure.

Directory Quotas: By default, a scan does not include home folder quota information, because gathering this information on Windows shares can extend the scan time significantly. Unless you plan to generate a Directory Quota report, we recommend that you leave this option deselected.

This option applies only to File System scans.

Previous Scans: This option lets you specify whether to keep the previous version of a scan generated through this policy. This scan is known as the “Previous scan” which you can then use to generate a Historic Comparison report through a comparison with either a Baseline scan or a “Current scan.” For more information, see Section 6.7, “Historic Comparison Reports,” on page 79.

Previous scans are designated whenever a new scan is performed. The new scan is the Current scan and the earlier scan becomes the Previous scan. When the target paths are eventually scanned again, the new scan becomes the Current scan, the earlier Current scan becomes the Previous scan, and the former Previous scan is deleted.

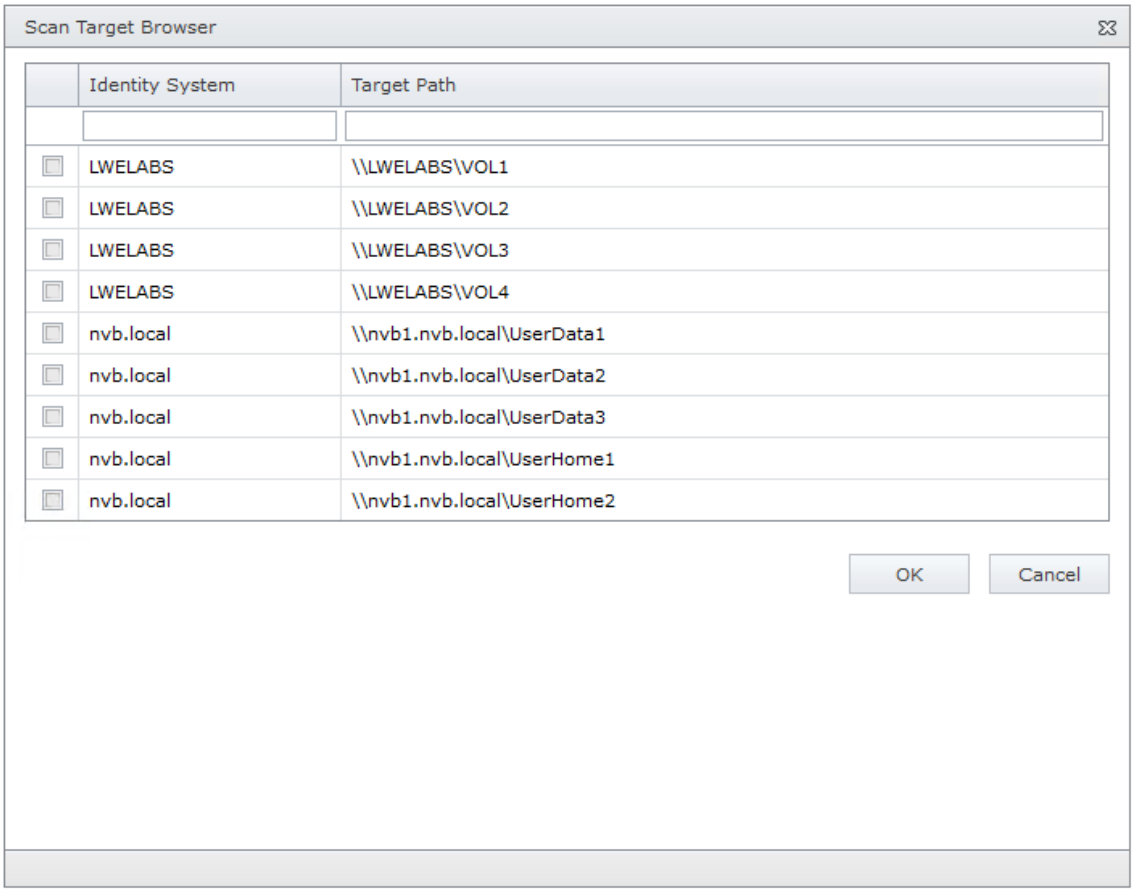
NOTE: If you want to maintain a scan indefinitely, you can do so by specifying it as a Baseline scan. For more information, see Section 5.5, “Establishing a Baseline Scan,” on page 46.

The management of Previous scan retention occurs when processing a new scan. This means that if you deselect *Retain existing Previous scan*, no existing Previous scan will be removed at that time, but it will be removed when a new scan is processed.

Add Target: Click this option to specify the scan targets for the scan policy.

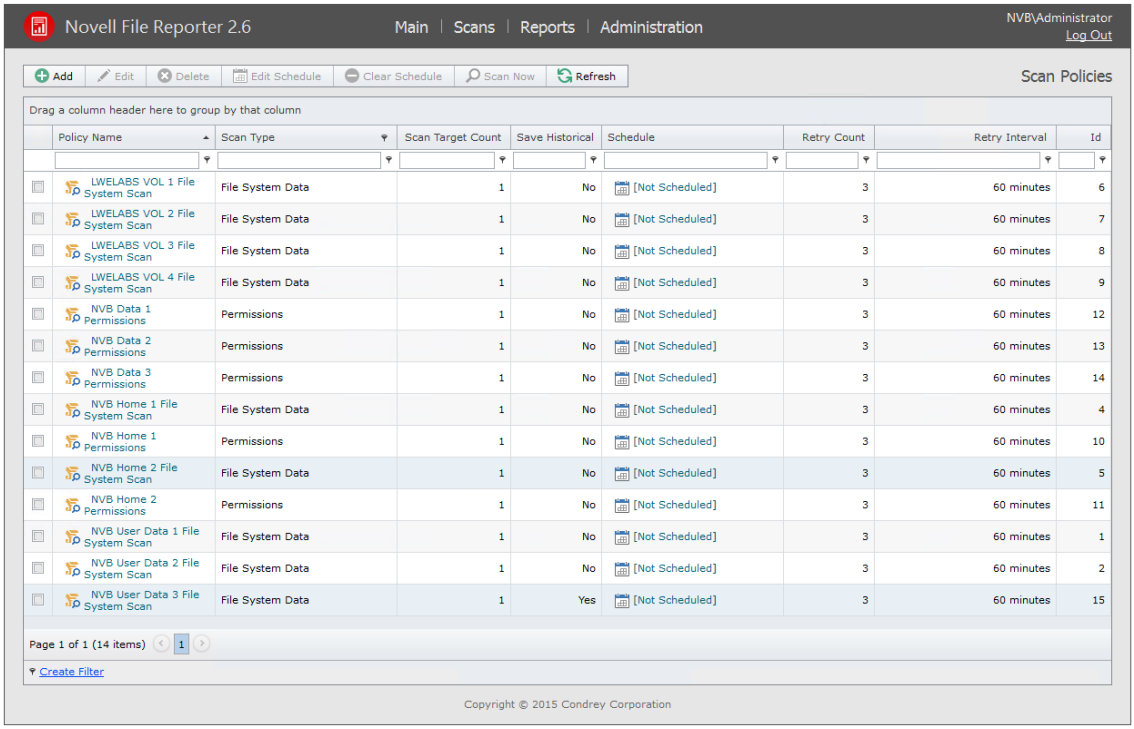
IMPORTANT: After a target has been added to a scan policy, the same target cannot be added to another scan policy of the same scan policy type. For example, if you specify `\\Pinyon\Vol1` in one File System scan, you cannot specify the same volume in another File System scan.

Clicking brings up a dialog box like the one below where you can select available storage resources.



6 Click *OK* to save the scan policy.

The scan policy is now displayed on the Scan Policies page.



The scan policy still needs to be scheduled. For procedures on scheduling scans, go to Section 5.9, “Scheduling Scans,” on page 47.

5.5 Establishing a Baseline Scan

A Baseline scan is a scan that you save as a reference for a comparison with another scan. You compare scans when you generate a Historical Comparison report. Unlike a Previous scan, which gets replaced as a new Current scan is created, a Baseline scan is retained indefinitely until you decide to delete it. You can have only one Baseline scan per scan target.

IMPORTANT: Because you can have only one Baseline scan per scan type for a scan target, establishing a scan as a Baseline will override any established Baseline scan of the same scan type for the same scan target.

---

1. Select *Scans* > *Scan Data*.
2. In the far left column, select the check box pertaining to the scan you want to set as a Baseline scan.
3. Click *Set Baseline*.
4. When the confirmation dialog box appears, click *Yes*.

5.6 Clearing a Baseline Scan

Scans designated as Baseline scans are retained until the baseline designation is cleared. If a Baseline scan that is in the Retained state has its Baseline status removed, that scan will be immediately marked for deletion.

1. Select *Scans* > *Scan Data*.
2. In the far left column, deselect the check box pertaining to the scan you want to clear as a Baseline scan.
3. Click *Clear Baseline*.
4. When the confirmation dialog box appears, click *Yes*.

5.7 Editing a Scan Policy

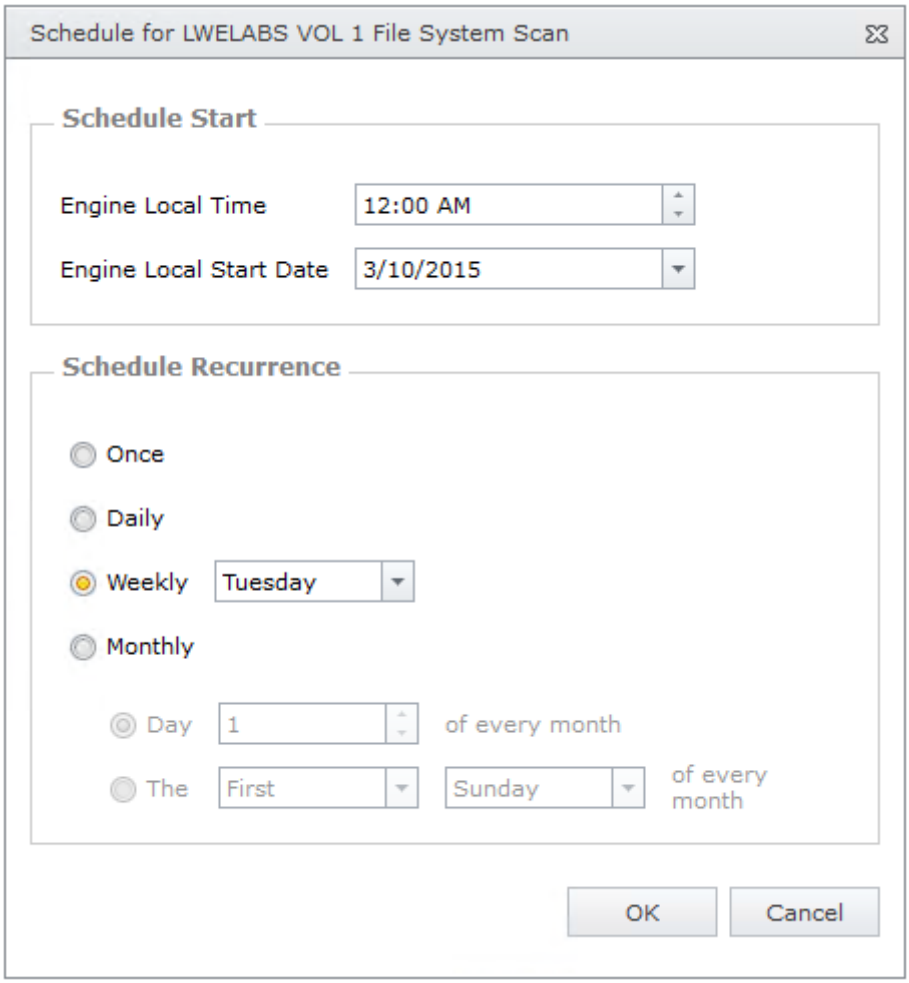
1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy that you want to create a edit.
3. Click *Edit*.
4. Change any of the settings you wish.
5. Click *OK*.

5.8 Deleting a Scan Policy

1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy that you want to delete.
3. Read the warning and click *Yes*.

5.9 Scheduling Scans

1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy for which you want to create a schedule.
3. Click *Edit Schedule*.



Engine Local Time: Specify the time that you want the scan to begin.

The time you select is based on the time zone where the NFR Engine is located and not the NFR Agent that conducts the scan.

Engine Local Start Date: Specify the date when you want the scan schedule to take effect.

Be aware that entering a date does not mean that the scan takes place on that date. If the *Engine Local Start Date* is set for today, which is a Monday, but the *Schedule Recurrence* setting is set for *Weekly* on Sunday, the scan does not take place until Sunday.

Once: Select this option to scan the storage resources specified in the scan policy only once.

Daily: Select this option for a daily scan of the storage resources specified in the scan policy.

Weekly: Select this option and specify a weekday for a weekly scan of the storage resources specified in the scan policy.

Monthly: Select this option and specify a day for a monthly scan of the storage resources specified in the scan policy.

4 Specify the scheduling parameters and click *OK*.

5.10 Editing a Scheduled Scan

1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy for which you want to edit a schedule.
3. Click *Edit Schedule*.
4. Make the schedule changes you want.
5. Click *OK*.

5.11 Clearing a Schedule on a Scheduled Scan

1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy for which you want to clear a schedule.
3. Click *Clear Schedule*.
4. When the confirmation prompt appears, click *Yes*.

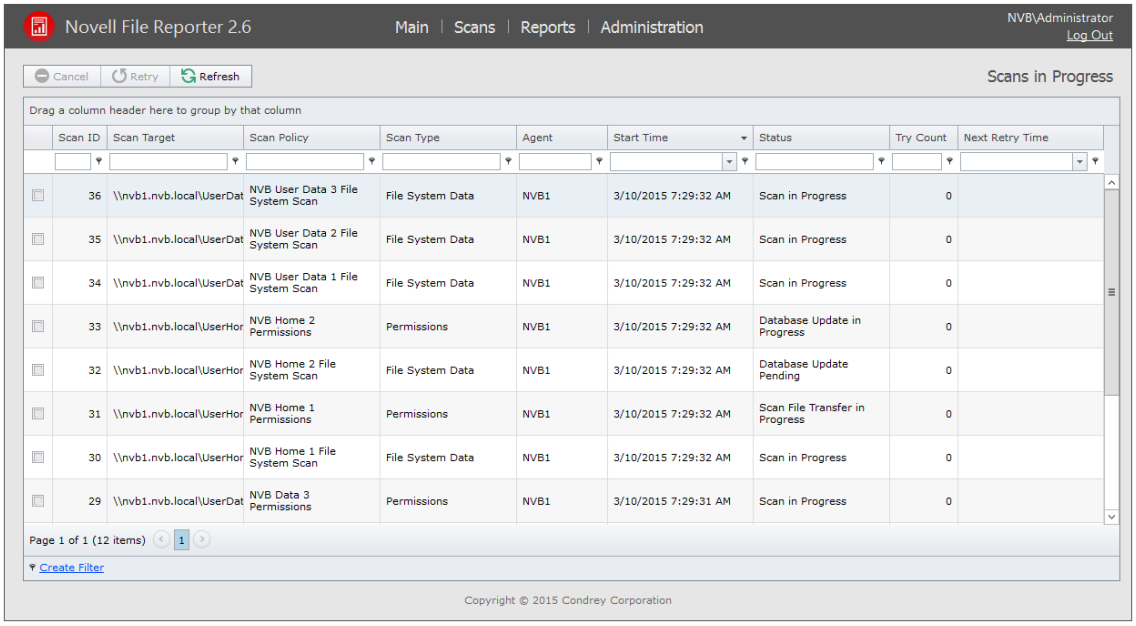
5.12 Conducting an Immediate Scan

1. Select *Scans* > *Scan Policies*.
2. Click the check box that pertains to the scan policy for which you want to conduct an immediate scan.
3. Click *Scan Now*.
4. When the confirmation prompt appears, click *Yes*.

5.13 Viewing Scans in Progress

You can view details on the scans that are in progress through the Scans in Progress page. When the scan has been completed, you can view the details in the Scan History page.

1. Select *Scans* > *Scans in Progress*.



As you click *Refresh*, the completed scan listings are removed and listen in the Scan Data and Scan History pages.

5.14 Retrying Failed Scans

In the Scan Policy Editor dialog box, the default scan policy settings for *Retry Count* is three and the *Retry Interval* is 60 minutes. You can adjust each of these settings. Assuming the default settings are not adjusted, Novell File Reporter retries the scan in 60 minutes and only retries to scan up to three times.

Until Novell File Reporter has attempted all three retries, the failed scans remain listed on the Scans in Progress page. After all retries have been performed, the scan listing is moved to the Scan History page.

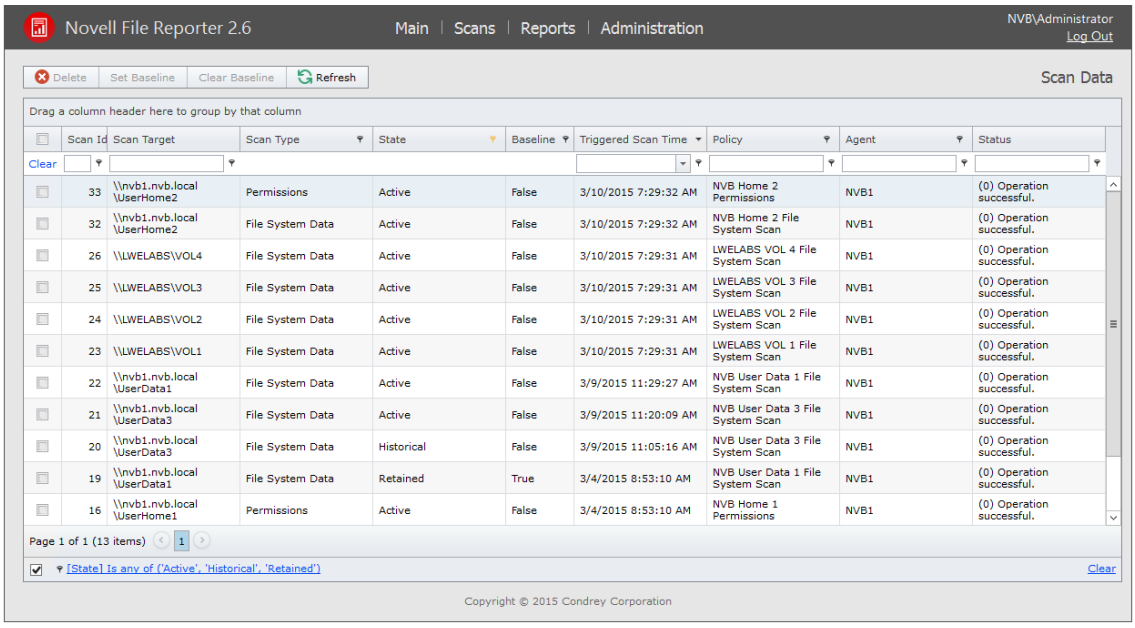
As long as a filed scan is listed on the Scans in Progress page, you can retry the scan manually by doing the following:

1. From the Scans in Progress page, select the check box corresponding to the failed scan.
2. Click *Retry*.

5.15 Viewing Scan Data

The Scan Data page lets you view a minimal set of details pertaining to the currently available scans for each scan target.

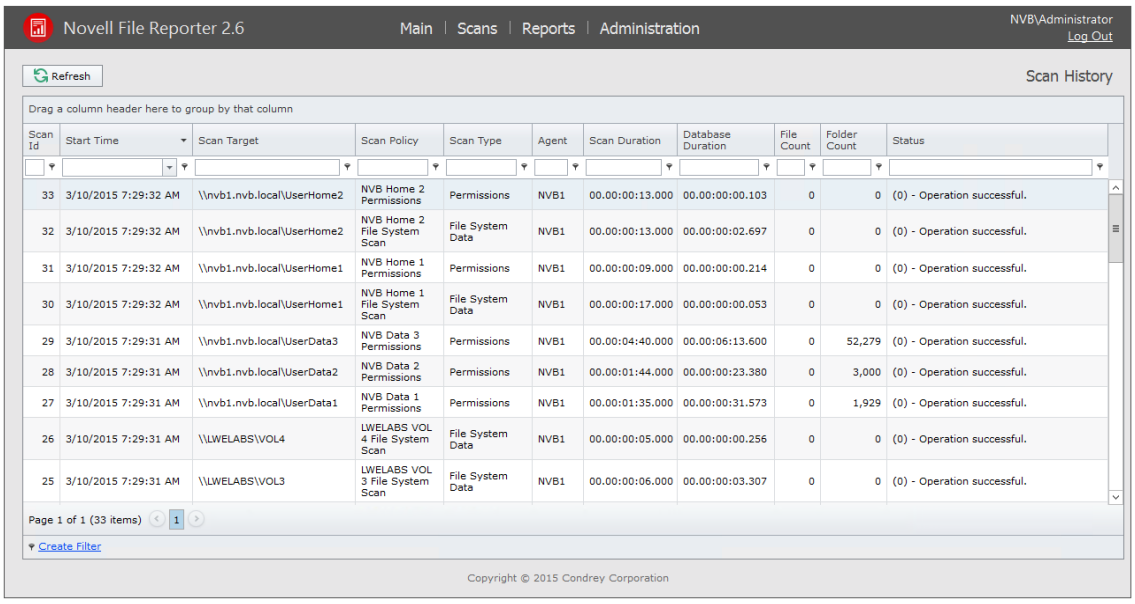
1 Select *Scans* > *Scan Data*.



5.16 Viewing Scan History

The Scan History page displays a complete history of all scans, along with details of the scan and some basic information of the storage resource at the time of the scan, including the file and folder count.

1 Select *Scans* > *Scan History*.



You can click the columns to list the data in ascending or descending order.

Because the Scan History page logs each successful scan, the most efficient way of locating a scan is using a filter.

5.17 Troubleshooting a Failed Scan

1. Verify that the NFR Agent service is running properly on its host machine.
2. Verify that the host machine where the NFR Agent is installed has enough free disk space to temporarily store a copy of the scan in its uncompressed and compressed form.
3. If an NFR Agent is not installed directly on the server with the storage resource you want to scan, verify that a proxy assignment for the storage resource has been established.
4. If the proxy agent is not scanning, assign the storage resource from a different proxy agent and try scanning again.
5. When scanning Windows storage resources, verify that the Proxy Rights group has been assigned the proper rights to the share.

   The Proxy Rights group must be assigned to the builtin\administrators group or the local administrators group on the server where the scan is being conducted.
6. Verify that the Windows Firewall is configured to permit network traffic to flow between the NFR Engine and the NFR Agent.

   For more information on the Windows Firewall, see Section B.2, “Windows Firewall Requirements,” on page 131.

6 Generating Reports

6.1 Overview

After you have conducted scans on storage resources, Novell File Reporter has the content needed to generate reports. The type of report you can generate depends on the type of scan that you have conducted. For example, in order to create an Assigned NTFS Permissions report, a Permissions scan on a Windows share must first be conducted.

All reports are created by first creating report definitions. The report definition specifies the report name, type, target path to the scans, and more.

IMPORTANT: The report definition name must be unique. If you attempt to give the report definition an existing name, Novell File Reporter generates an error.

Novell File Reporter has built-in aggregate reporting capabilities, meaning that you can specify multiple target paths in the same report. Additionally, Novell File Reporter has built-in scoping, which allows you to browse through the file path or identity system and specify the level where you want to start reporting data. Finally, Boolean filtering is available for all File Data Reports. For more information, see Appendix A, “Filtering,” on page 125.

When the definition has been saved, you can generate the report immediately, or schedule it to be generated.

You can generate reports in either Preview or in Stored Report mode. Preview lets you view the report where you can save it locally if you want to. Stored Report saves the report to the server hosting the NFR Engine, where it remains for a set amount of days.

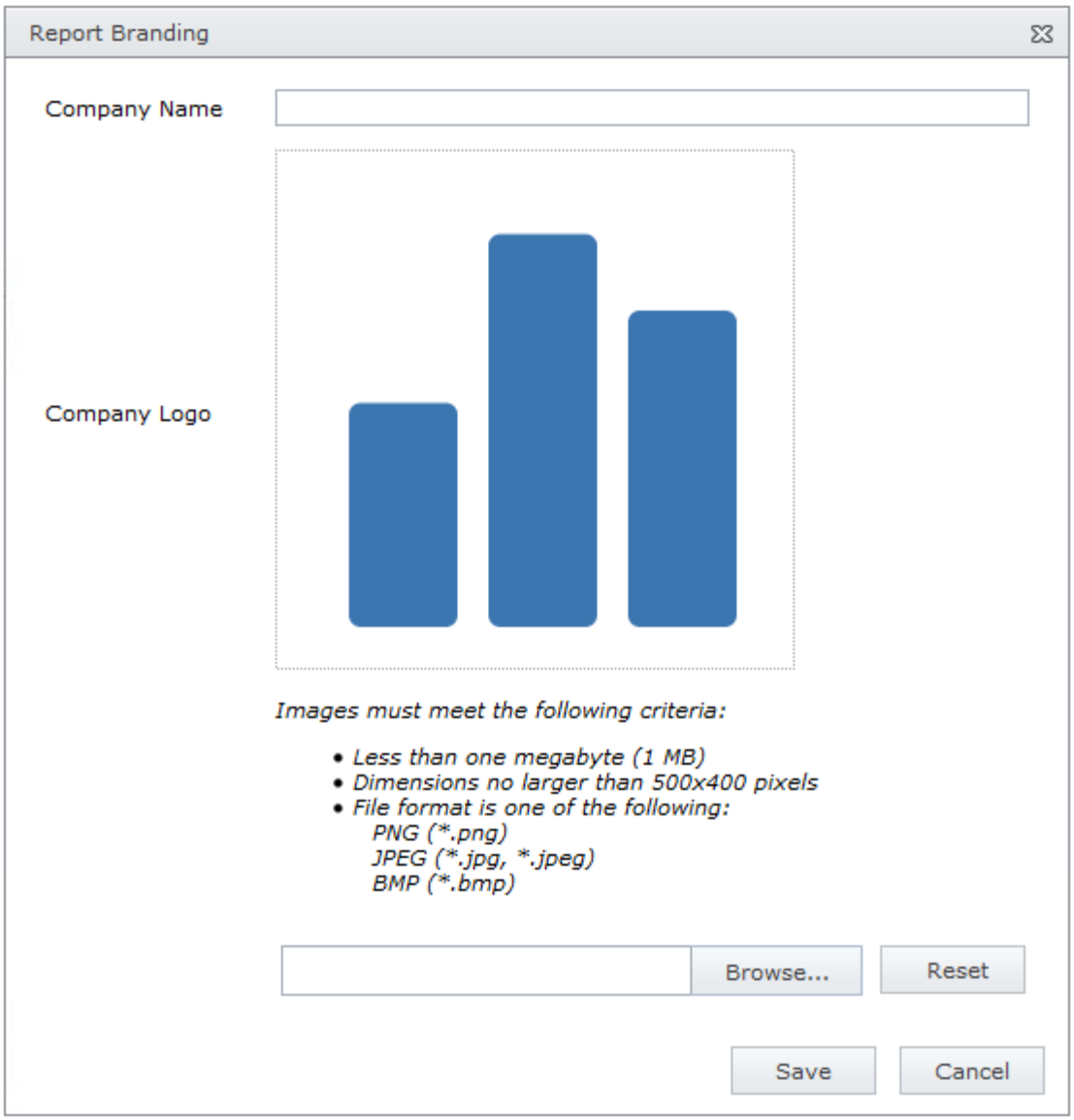
You can generate Detailed Reports from certain built-in report types. For example, a File Extension Report can be the means of generating a Detailed Report that includes the specific details of all of the `*.mov` files.

All built-in reports include a cover sheet that you can customize to include your organization's logo.

6.2 Changing Your Cover Sheet Branding

All generated built-in reports include a cover sheet that includes a default graphic. If you want, you can replace it with your organization's logo.

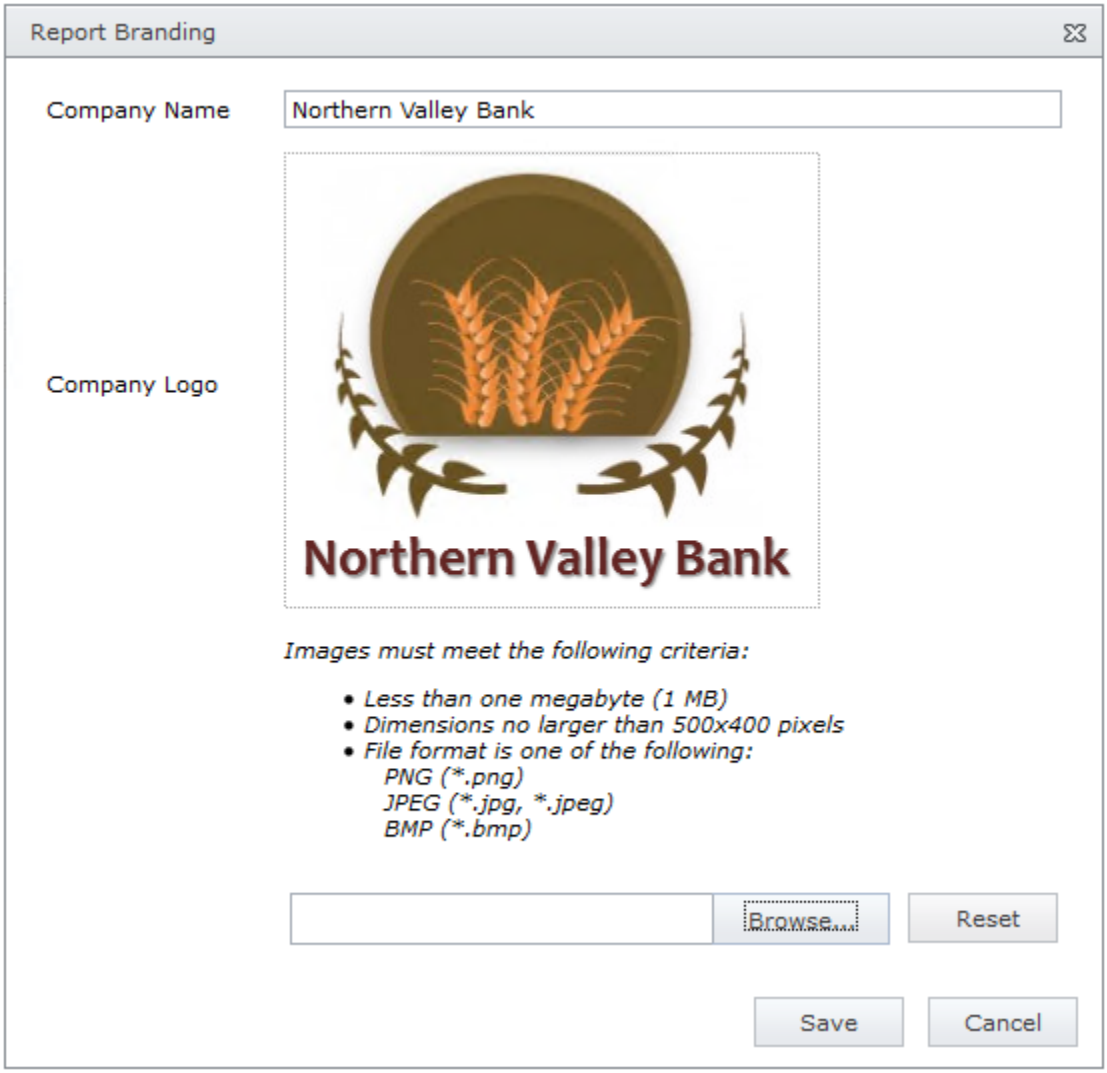
1. Select *Reports* > *Report Definitions*.
2. Select *Report Branding and Styling* > *Report Branding*.



3 In the *Company Name* field, specify the name of your organization.

This is the name that appears on the front cover.

4 Click *Browse*, then browse to and replace the default logo with a new logo.



5 Click *Save*.

6.3 Built-in Report Types

Novell File Reporter has five different built-in report type classifications:

- Directory Data
- Permissions
- File Data
- Historic Comparison
- Trending

Each classification includes one or more report types. For example, in the Permissions category, there are four different reports that can be generated.

For more information about the procedures for generating built-in reports according to classification, see the following sections:

- Section 6.4, “Directory Data Reports,” on page 56
- Section 6.5, “Permissions Reports,” on page 66
- Section 6.6, “File Data Reports,” on page 70
- Section 6.8, “Trending Report,” on page 84
- Section 6.10, “Unformatted Reports,” on page 87

6.4 Directory Data Reports

Reports in this classification include Summary, Directory Quota, Storage Cost, and Comparison Reports.

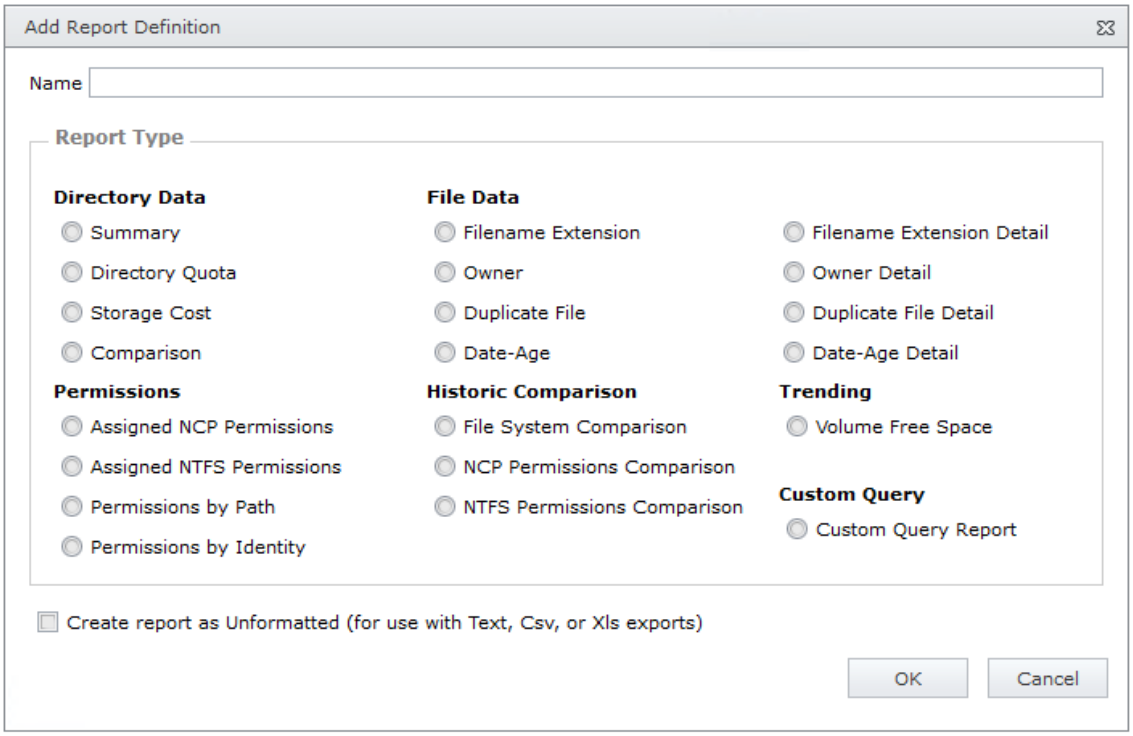
Before generating any type of Directory Data report, you must first conduct a File System scan on the volumes or shares you want to report on.

- Section 6.4.1, “Generating a Summary Report,” on page 56
- Section 6.4.2, “Generating a Directory Quota Report,” on page 63
- Section 6.4.3, “Generating a Storage Cost Report,” on page 63
- Section 6.4.4, “Generating a Comparison Report,” on page 64

6.4.1 Generating a Summary Report

Summary reports provide a summary of the contents of folders according to a specified level in the file system.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.

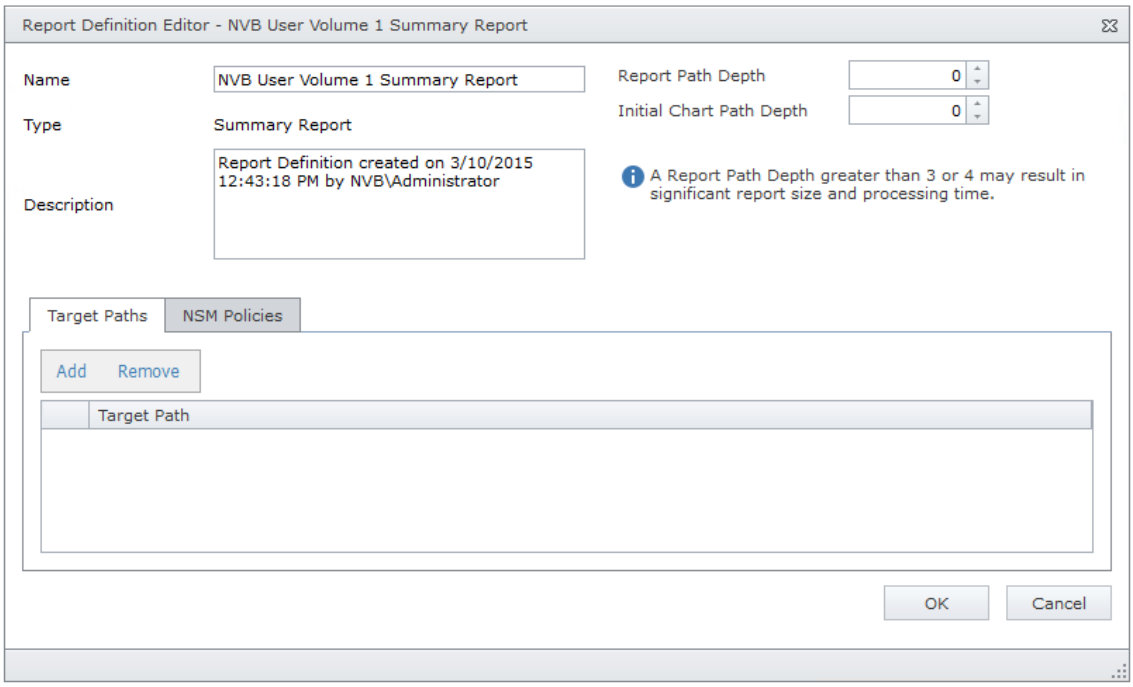


3 In the *Name* field, specify a descriptive name of the report definition.

For example, User Volume Summary Report.

The name can contain up to 64 alphanumeric characters.

4 Select the *Summary* option and click *OK*.



5 In the *Report Path Depth* field, specify the depth of reporting.

For example, if you select 3, the Summary report lists the file contents of all file paths in the specified shares up to 3 levels in the file structure.

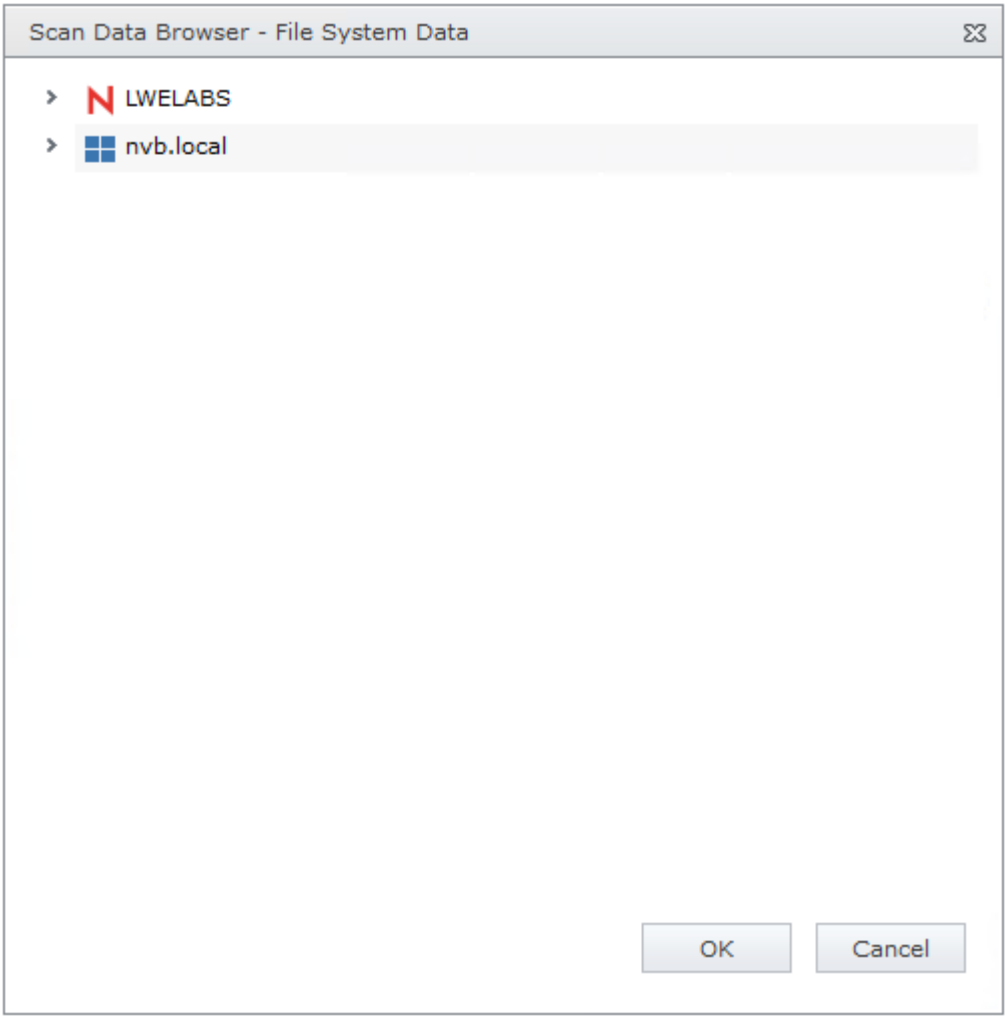
For example, for a server named Las Vegas, the Summary report would list the contents of these paths:

```
\\lasvegas.nvb.local\Users1
\\lasvegas.nvb.local\Users1\a
\\lasvegas.nvb.local\Users1\a\stuff
\\lasvegas.nvb.local\Users1\a\stuff\morestuff
```

6 In the *Initial Chart Path Depth* field, specify the initial path depth for inclusion in the Top Ten Folders by Size chart that is displayed in the report header section.

This is important so that when the *Report Path Depth* is greater than zero, the top level folders are now conditionally included. The *Chart Path Depth* parameter is not allowed to be greater than the currently specified *Report Path Depth*.

7 From the *Target Paths* tab, click *Add*.

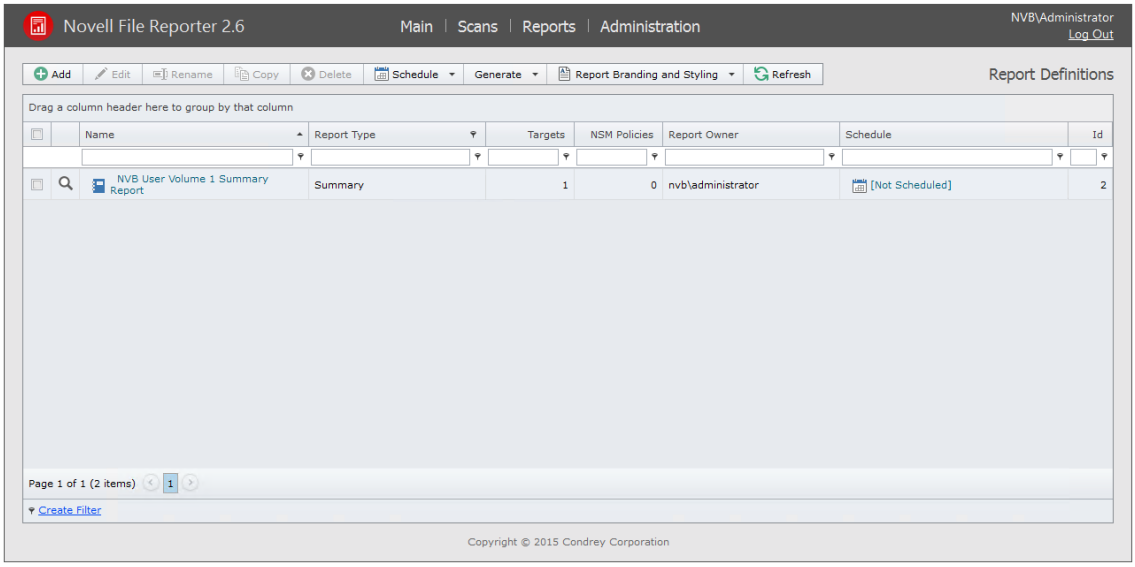


8 Click the > to browse to and select the file paths you want included in the report, then click *OK*.

You must expand the eDirectory tree or Active Directory forest to be able to select the volumes or shares, even if you want to select the root of the eDirectory tree or Active Directory forest.

9 Click *OK*.

The report definition is added to the list.



10 Do one of the following:

- Generate the report in Preview mode by following the procedures under "Generating a Preview Report" on page 59.
- Generate the report in Stored mode by following the procedures under "Generating a Stored Report" on page 61.

Generating a Preview Report

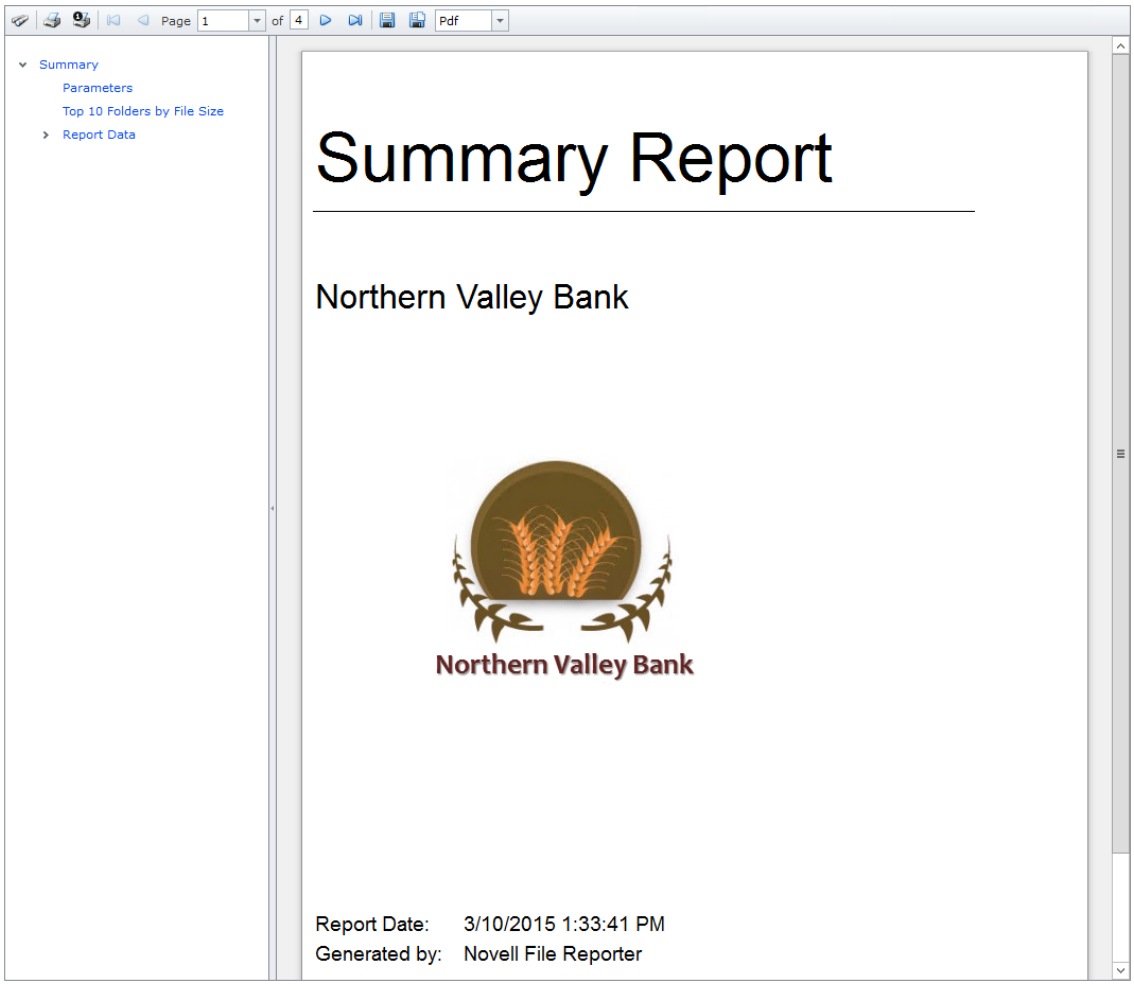
A preview report is generated from scan data in the database and is temporarily cached in the Web application's data folder. When you close a preview report, you cannot access the report again until you generate a new one using the same report definition.

When you view a report in Preview mode, you can print the report or save the report locally.

1 From the Report Definitions page, select the report definition from which you want to generate a report.

2 Select *Generate* > *Generate Preview*.

3 (Conditional) If you get a message stating that your browser prevented pop-up windows from appearing, enable pop-ups for this site.



All reports are structured similarly, with a title page, report parameters, for some report types a Top Ten summary, followed by a comprehensive breakdown of the data in the pages that follow.

Display the Search Window button: Lets you conduct a search within the preview report.

Print the Report button: Prints the entire preview report.

Print the Current Page button: Prints the currently displayed page.

First Page button: Takes you to the first page of the preview report.

Previous Page button: Takes you to the page that precedes the page you are viewing.

Page drop-down menu: Lets you advance to a page number by selecting it.

Next Page button: Takes you to the page that follows the page you are viewing.

Last Page button: Takes you to the last page of the preview report.

Export a Report and Save it to the Disk button: Exports the preview report to the file type listed in the drop-down menu and lets you view or save it in the new format.

Export a Report and Show it in a New Window button: Exports the preview report to the file type listed in the drop-down menu.

File Type drop-down menu: Lets you select the file type format to export the report to.

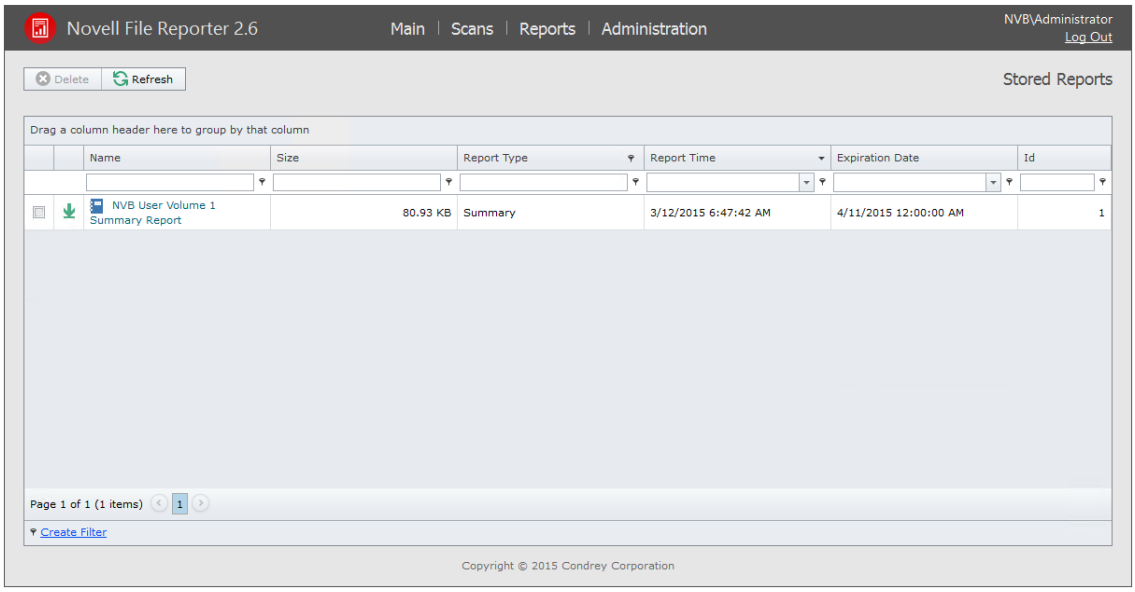
Document Navigation: Lists the contents of the report. You can click any item to advance within the preview report.

4 Export, save, or print the preview report.

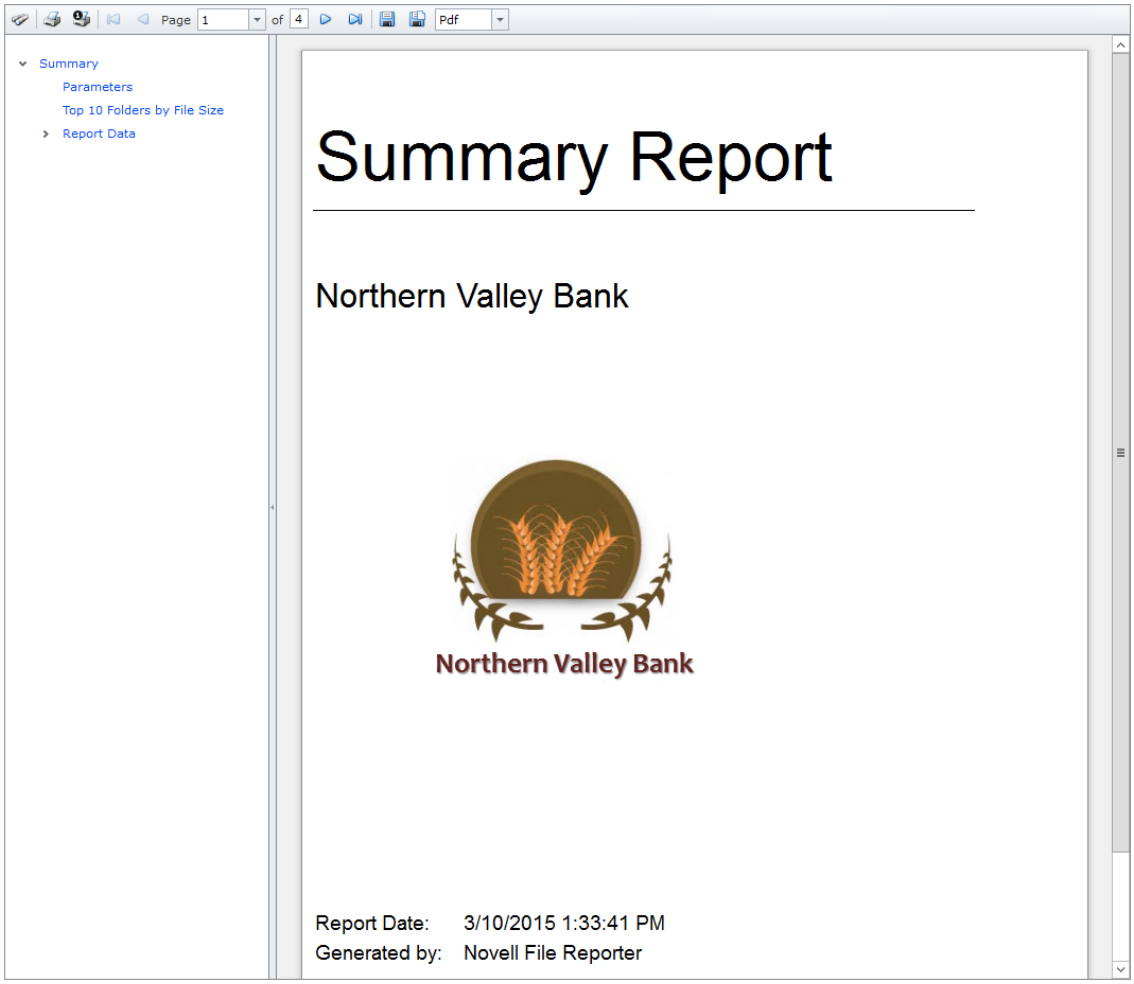
Generating a Stored Report

Generating a report in Stored mode means that the report is saved and available for access for a set number of days from the time it is generated. Of course, you can save the report locally where you can keep it indefinitely.

1. From the Report Definitions page, select *Generate* > *Generate Stored Report.*
2. Select *Reports* > *Stored Reports*.



3. Click the report you want to view.
4. (Conditional) If you get a message stating that your browser prevented pop-up windows from appearing, enable pop-ups for this site.



All reports are structured similarly, with a title page, report parameters, for some report types a Top Ten summary, followed by a comprehensive breakdown of the data in the pages that follow.

Display the Search Window button: Lets you conduct a search within the preview report.

Print the Report button: Prints the entire preview report.

Print the Current Page button: Prints the currently displayed page.

First Page button: Takes you to the first page of the preview report.

Previous Page button: Takes you to the page that precedes the page you are viewing.

Page drop-down menu: Lets you advance to a page number by selecting it.

Next Page button: Takes you to the page that follows the page you are viewing.

Last Page button: Takes you to the last page of the preview report.

Export a Report and Save it to the Disk button: Exports the preview report to the file type listed in the drop-down menu and lets you view or save it in the new format.

Export a Report and Show it in a New Window button: Exports the preview report to the file type listed in the drop-down menu.

File Type drop-down menu: Lets you select the file type format to export the report to.

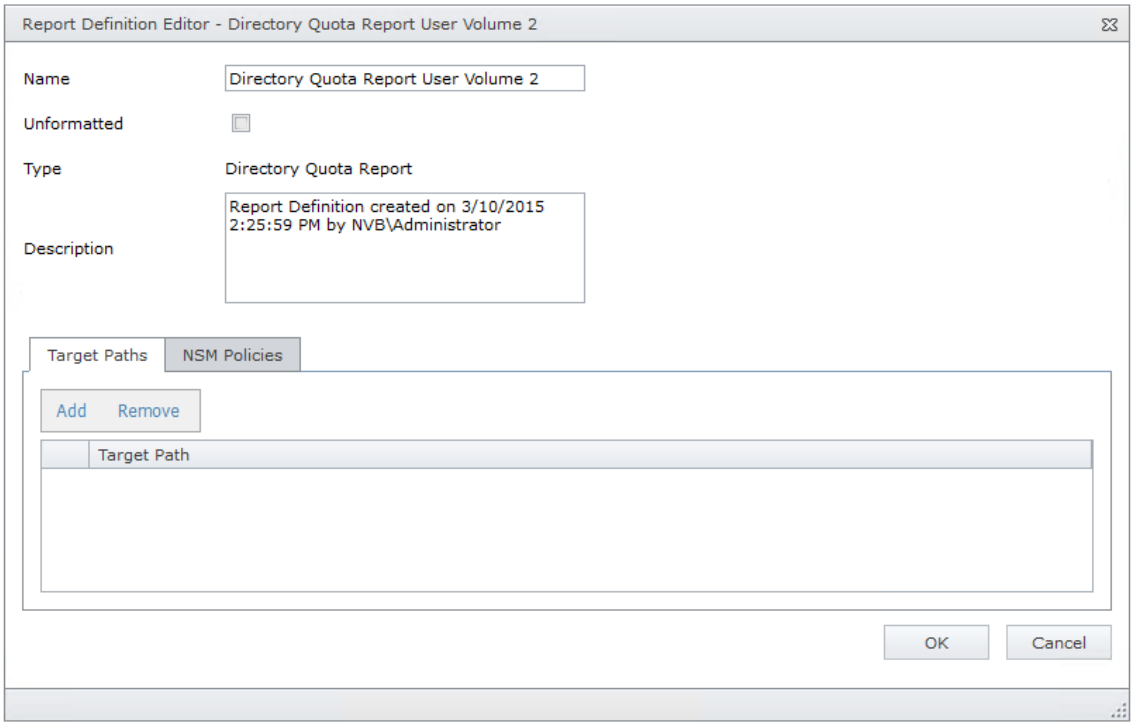
Document Navigation: Lists the contents of the report. You can click any item to advance within the preview report.

5 Save or print the stored report.

6.4.2 Generating a Directory Quota Report

Directory Quota reports specify folders with assigned quota, the amount of quota assigned, and the amount of quota consumed.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Directory Quota* option and click *OK*.



5. From the *Target Paths* tab, click *Add*.
6. Browse to and select the file paths you want included in the report and click *OK*.
7. Click *OK*.
8. Generate the report as either a Preview report or a Stored report.

   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

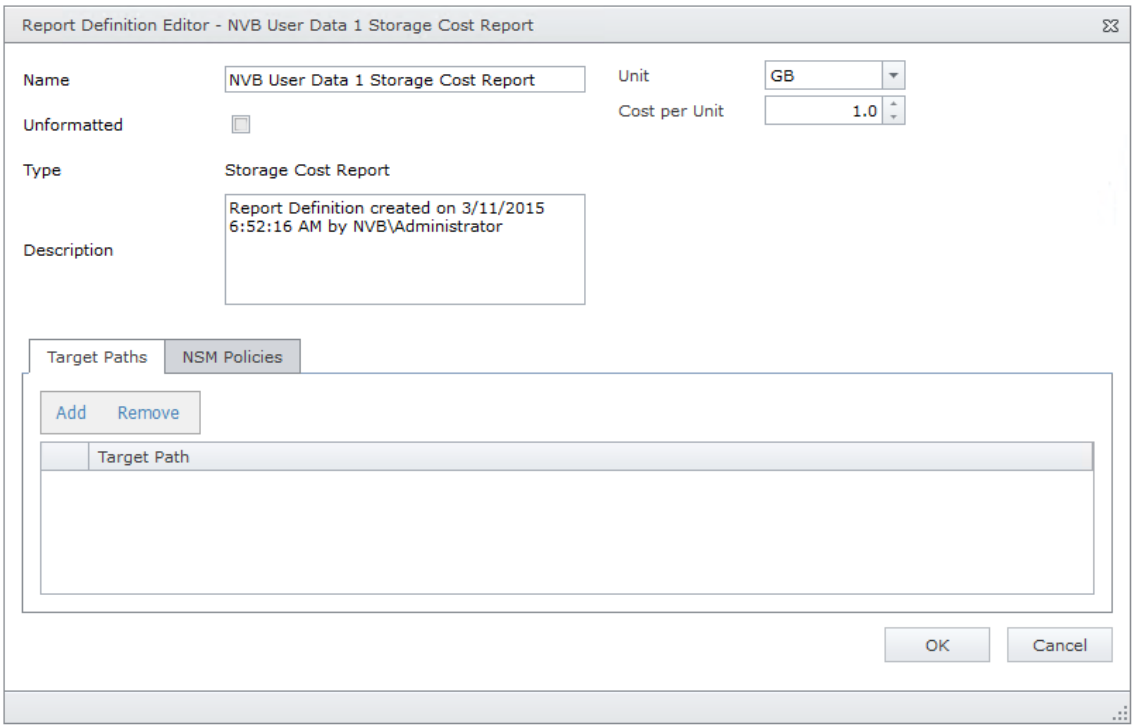
   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.4.3 Generating a Storage Cost Report

Storage Cost reports indicate storage costs according to prices established in the *Cost per Unit* setting of the Report Definition editor. You can use this report to determine which users or groups are being irresponsible with network storage practices.

NOTE: When the report is generated, the monetary symbol that is displayed comes from the local Engine/Web server's Windows locale and region settings. For example, if the Windows server hosting the engine and Web application is set up using US locale and region, it will show a $ for costing displays in the report.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Storage Cost* option and click *OK*.



5. In the *Unit* drop-down menu, select the storage unit value for which you want to establish a cost.
6. In the *Cost per Unit* field, indicate the cost of the selected storage unit.
7. From the *Target Paths* tab, click *Add*.
8. Browse to and select the file paths you want included in the report and click *OK*.
9. Click *OK*.
10. Generate the report as either a Preview report or as a Stored report.

    For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

    For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.4.4 Generating a Comparison Report

A Comparison report specifies the differences between two selected folders on the network. This is useful if you want to verify that servers are hosting the same version of software, library files on servers are the same, and so forth.

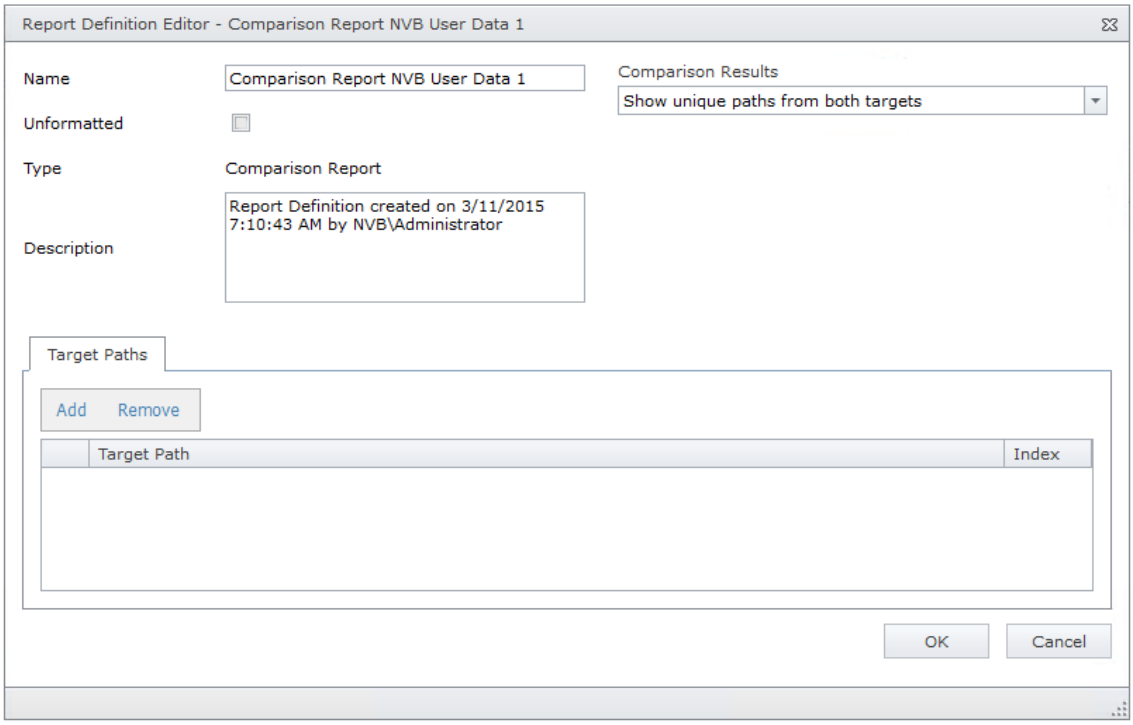
IMPORTANT: Unlike Novell File Reporter 1, the Comparison report does not compare scans to report on the differences between two points in time.

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Comparison* option and click *OK*.



5 In the *Comparison Results* drop-down menu, select an option.

Show unique paths from both targets: The report indicates the differences in folder and file names for the compared target paths.

Show paths unique to the first target: The report indicates only the unique folder and file names found in the first target path.

Show paths unique to the second target: The report indicates only the unique folder and file names found in the second target path.

6 From the *Target Paths* tab, click *Add.*

7 Browse to and select two volumes, shares, or folders whose data you want to compare and click *OK*.

8 Click *OK*.

9 Generate the report as either a Preview report or as a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.5 Permissions Reports

Reports in this classification include Assigned NCP Permissions, Assigned NTFS Permissions, Permissions by Path, and Permissions by Identity.

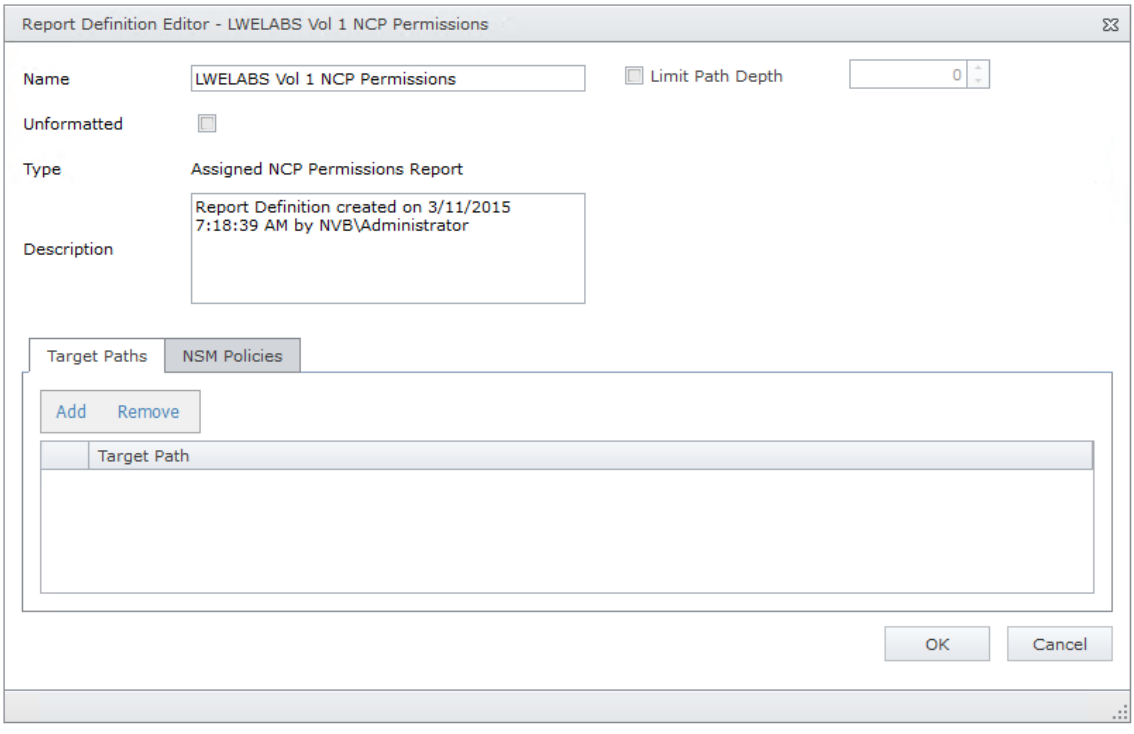
NOTE: The term “Permissions” in Novell File Reporter includes NTFS permissions as well as NCP rights and trustee assignments.

Before generating any type of Permissions report, you must first conduct a Permissions scan on the volumes or shares you want to report on.

6.5.1 Generating an Assigned NCP Permissions Report

The Assigned NCP Permissions report indicates the assigned Novell file system rights and trustee assignments for all folders and subfolders from a specified path.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Assigned NCP Permissions* option and click *OK*.



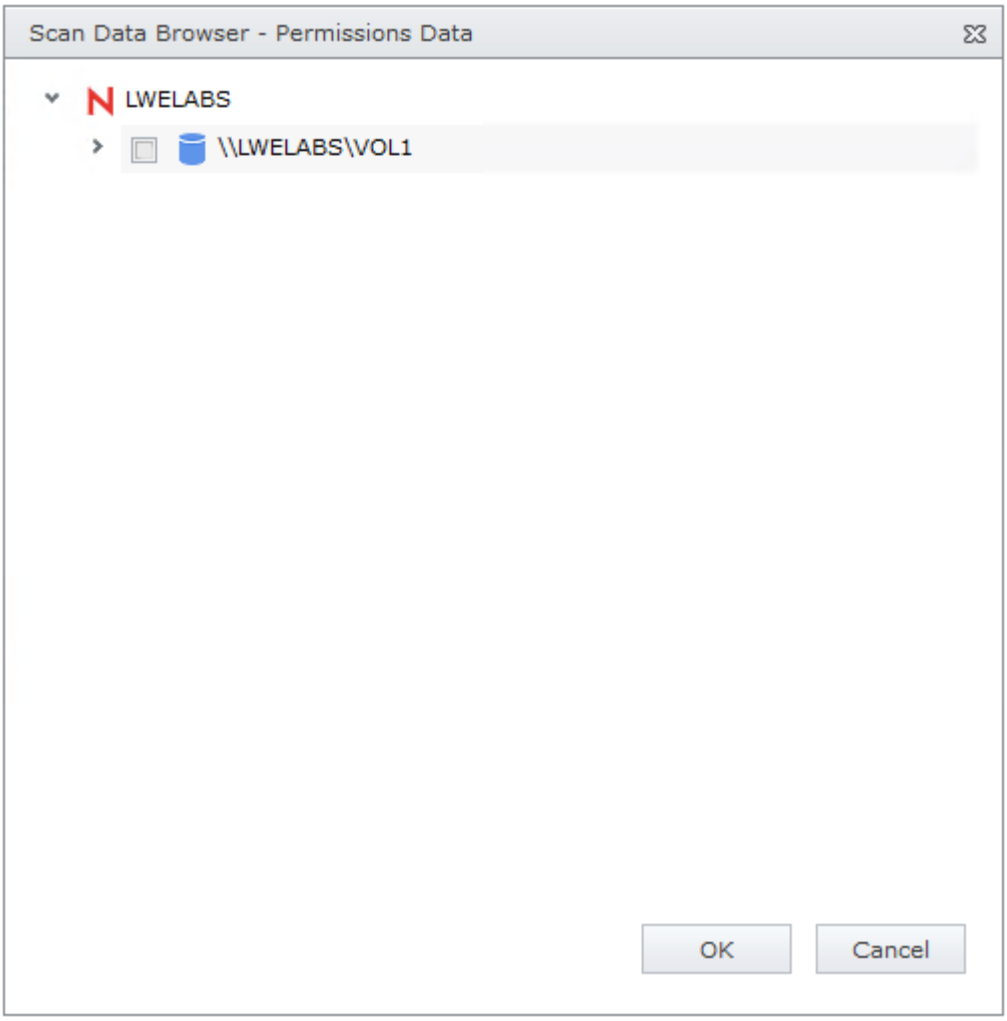
5. (Conditional) If you want to limit the scope of the report to a set depth in the file structure, click the *Limit Path Depth* check box and specify the depth level.

For example, if you specify 3, the report lists the file contents of all file paths in the specified target paths up to 3 levels in the file structure.

If you do not specify a path depth, Novell File Reporter will report on all levels of the specified target path.

6 From the *Target Paths* tab, click *Add*.

7 Browse to and specify the file paths you want included in the report.



8 Click *OK* to close the Scan Data Browser.

9 Click *OK* to close the Report Definition Editor.

10 Generate the report as either a Preview report or a Stored report.

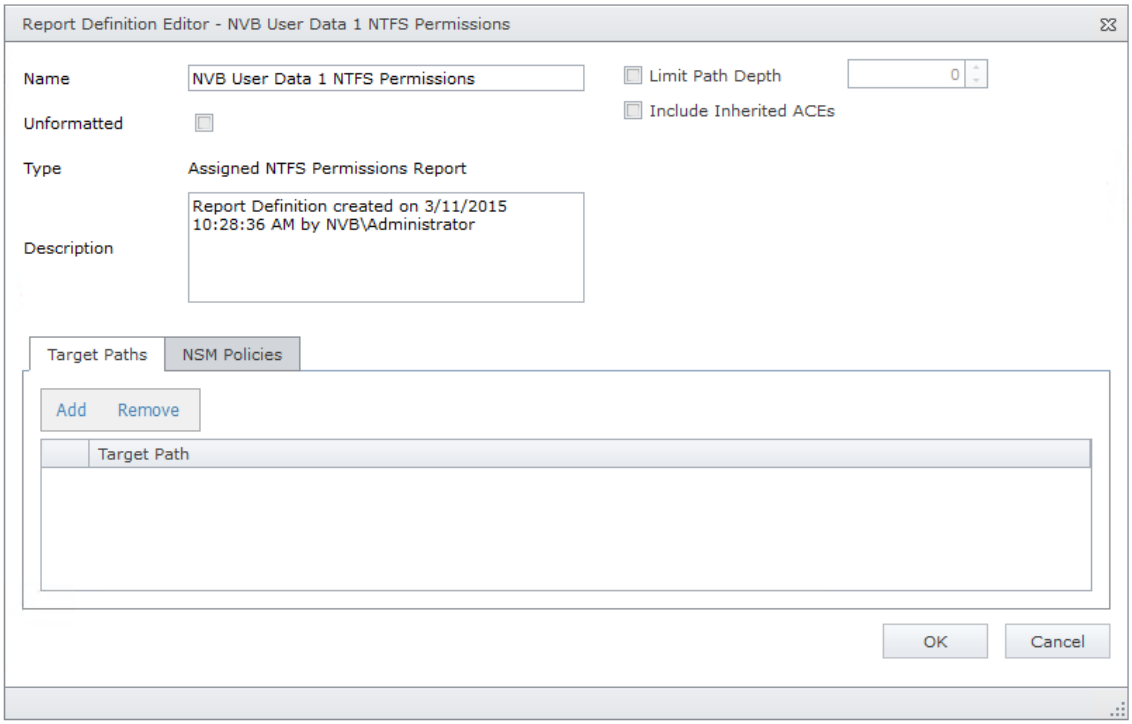
For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.5.2 Generating an Assigned NTFS Permissions Report

The Assigned NTFS Permissions report indicates the assigned Microsoft file system user permissions for all folders and subfolders from a specified path.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Assigned NTFS Permissions* option and click *OK*.



5. (Conditional) If you want to limit the scope of the report to a set depth in the file structure, click the *Limit Path Depth* check box and specify the depth level.

   For example, if you specify 3, the report lists the file contents of all file paths in the specified target paths up to 3 levels in the file structure.

   If you do not specify a path depth, Novell File Reporter will report on all levels of the specified target path.
6. (Conditional) If you don't want the report to include inherited ACEs (Access Control Entries), deselect the *Include Inherited ACEs* check box.
7. From the *Target Paths* tab, click *Add*.
8. Browse to and specify the file paths you want included in the report and click *OK*.
9. Click *OK*.
10. Generate the report as either a Preview report or a Stored report.

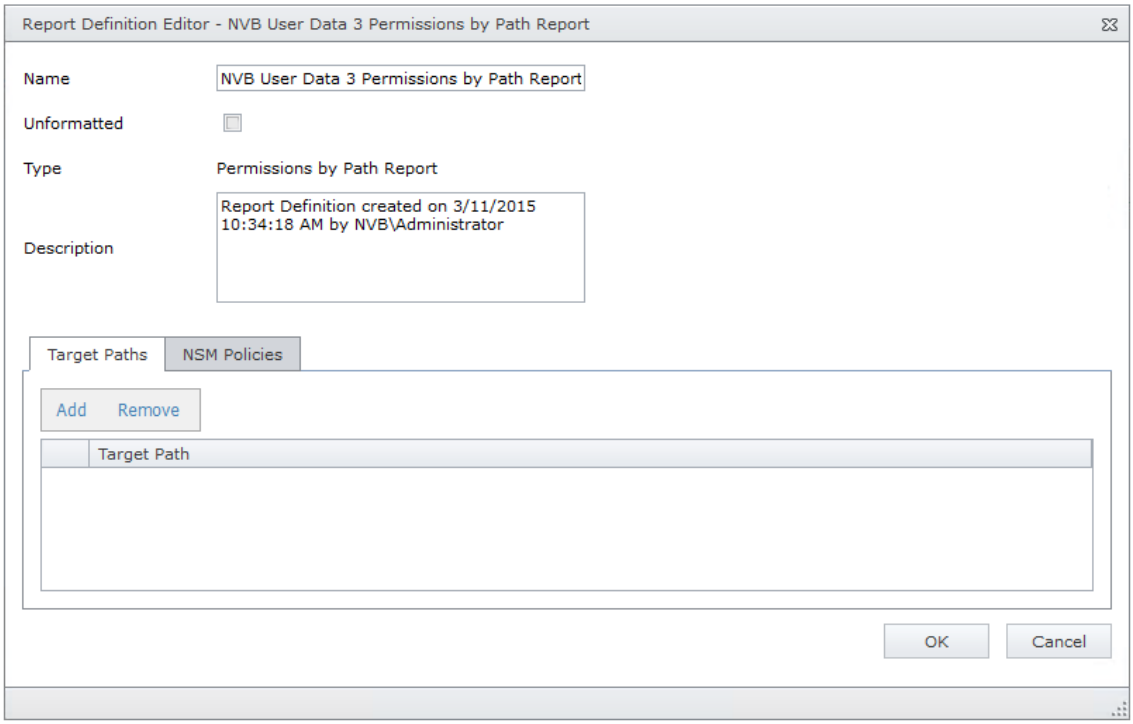
    For procedures on generating a Preview report, see "Generating a Preview Report" on page 59.

    For procedures on generating a Stored report, see "Generating a Stored Report" on page 61.

6.5.3 Generating a Permissions by Path Report

The Permissions by Path report indicates the effective rights to the Novell file system or the permissions to the Microsoft file system according to the paths you specify.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Permissions by Path* option and click *OK*.



5. From the *Target Paths* tab, click *Add*.
6. Browse to and specify the file paths you want included in the report and click *OK*.
7. Click *OK*.
8. Generate the report as either a Preview report or a Stored report.

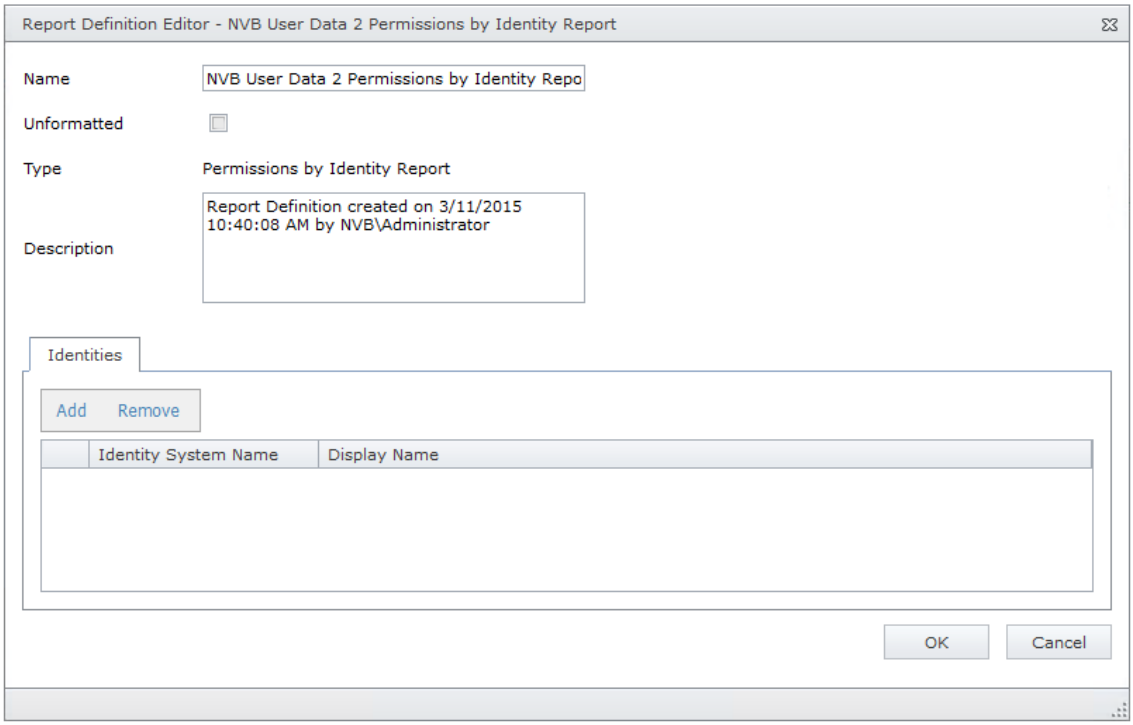
   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.5.4 Generating a Permissions by Identity Report

The Permissions by Identity report indicates the effective rights to the Novell file system or the permissions to the Microsoft file system according to the identities you specify.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Permissions by Identity* option and click *OK*.



5 From the *Identities* tab, click *Add*.

6 Browse to and specify the identities you want included in the report.

7 Click *OK* to close the Identity Browser.

8 Click *OK* to close the Report Definition Editor.

9 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.6 File Data Reports

Reports in this classification include Filename Extension, Owner, Duplicate File, and Date-Age, along with detailed versions of each of these reports.

Before generating any type of File Data report, you must first conduct a File System scan on the volumes or shares you want to report on.

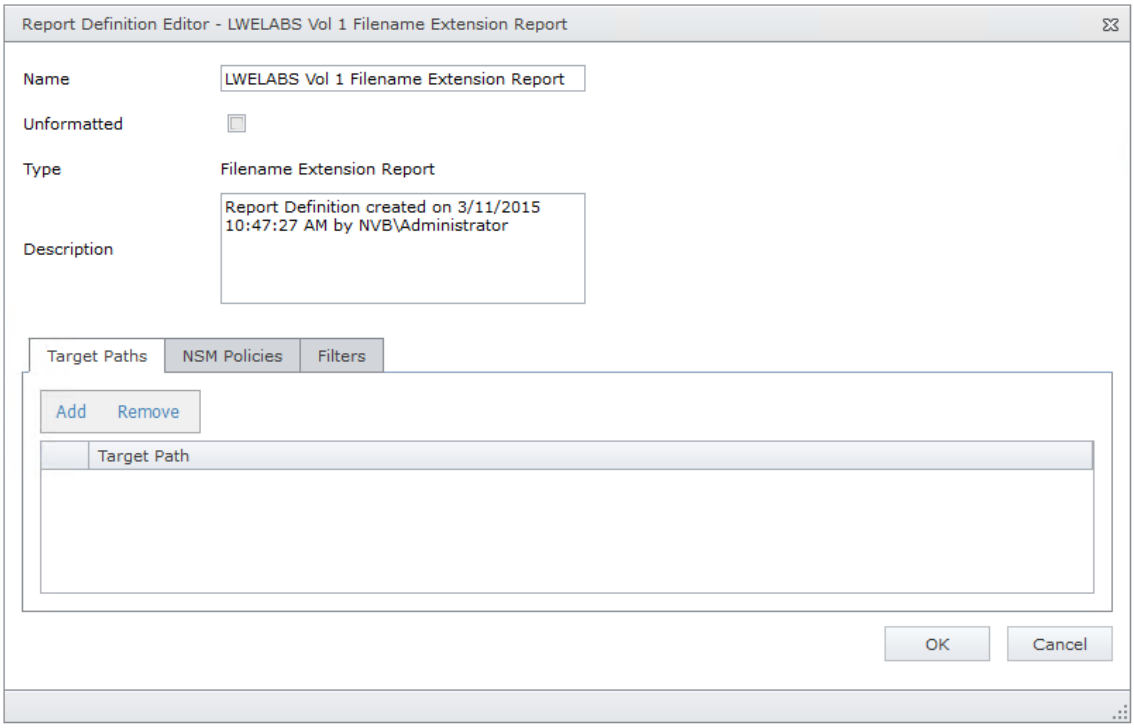
6.6.1 Generating a Filename Extension Report

The Filename Extension report presents data grouped according to filename extension. This report is helpful for determining file types that you do not want stored on your network drives. For example, you can easily identify who is storing .MP3 or .MOV files.

NOTE: File extensions in Novell File Reporter are limited to 32 characters. File extensions longer than 32 characters are considered part of the file name and not as an extension.

---

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Filename Extension* option and click *OK*.



5. From the *Target Paths* tab, click *Add*.
6. Browse to and specify the file paths you want included in the report and click *OK*.
7. (Optional) Click the *Filters* tab and set the filters for the report.

   For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.
8. Click *OK*.
9. Generate the report as either a Preview report or a Stored report.

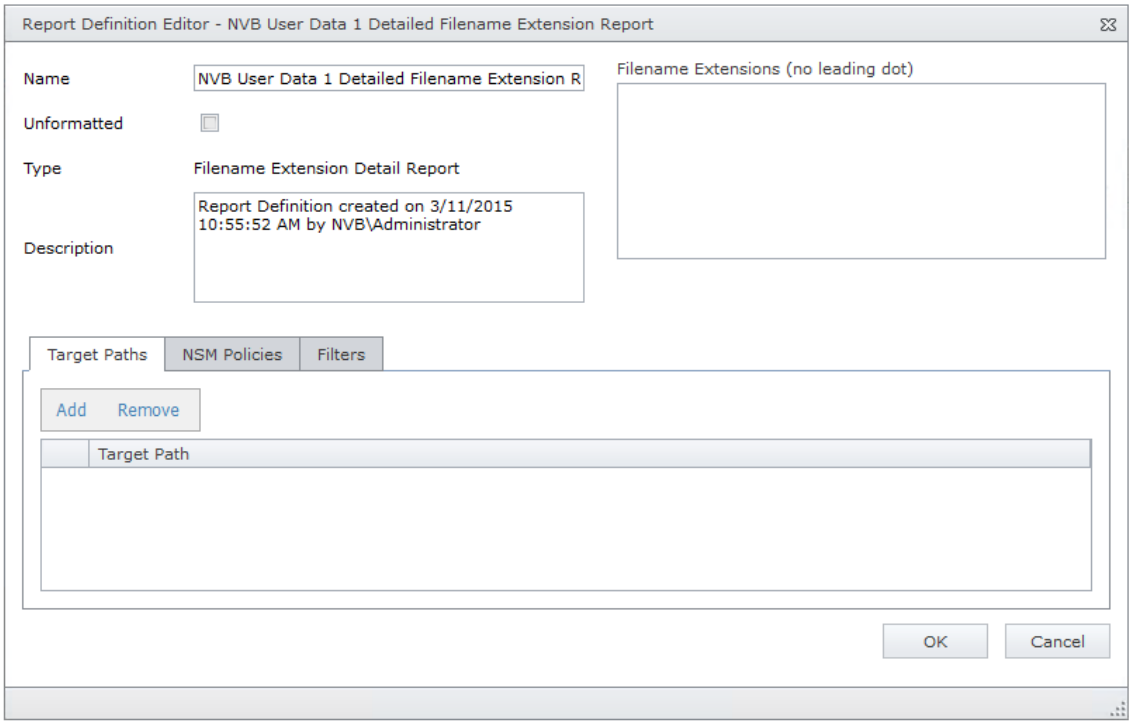
   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.
10. (Optional) Generate a Detailed report on an individual file extension by clicking a file extension name in the report.

6.6.2 Generating a Detailed Filename Extension Report

A Detailed Filename Extension report is similar to a standard Filename Extension report, except you can filter the report to include only the files with the extension types you want.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Filename Extension Detail* option and click *OK*.



5. In the *Filename Extension* field, specify the filename extensions you want included in the report by listing each on an individual line. Do not precede the filename extension with a period.

   For example:

   ```
   mov
   jpg
   tmp
   ```

6. From the *Target Paths* tab, click *Add*.
7. Browse to and specify the file paths you want included in the report and click *OK*.
8. (Optional) Click the *Filters* tab and set the filters for the report.

   For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.
9. Click *OK*.
10. Generate the report as either a Preview report or a Stored report.

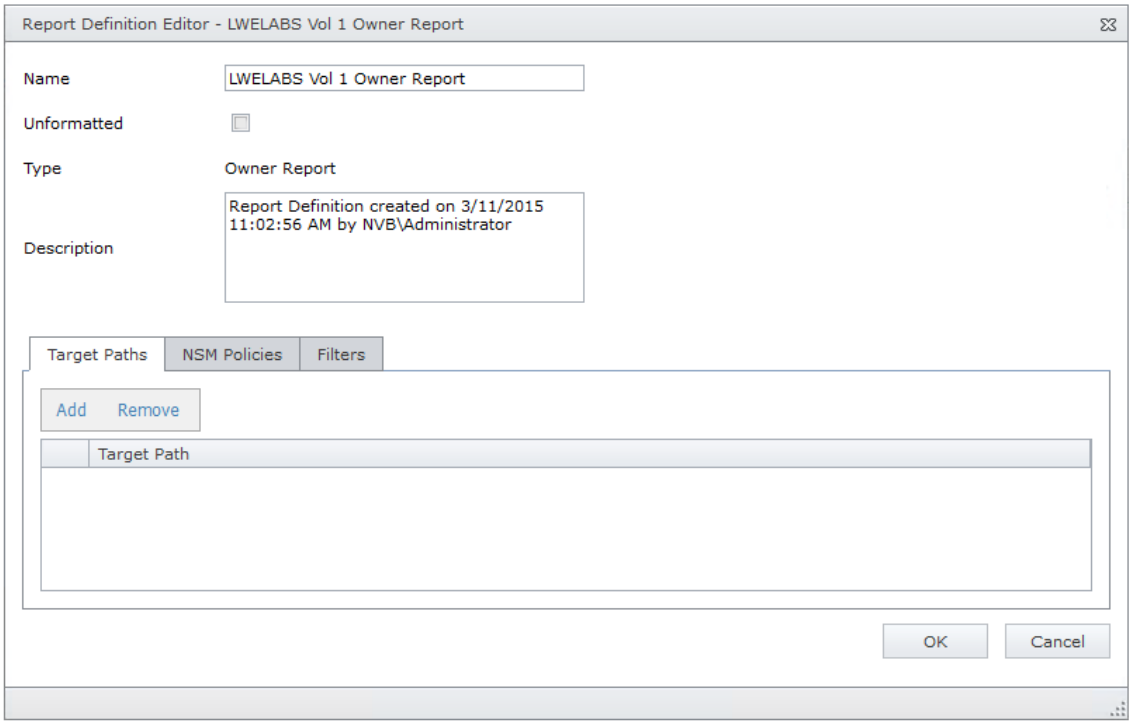
    For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

    For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.6.3 Generating an Owner Report

An Owner report groups data according to file owners. If it is determined that certain users are using a disproportionate amount of storage, you can see what these users are storing and if they are justified in doing so.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Owner* option and click *OK*.



5. From the *Target Paths* tab, click *Add*.
6. Browse to and specify the file paths you want included in the report and click *OK*.
7. (Optional) Click the *Filters* tab and set the filters for the report.

   For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.
8. Click *OK*.
9. Generate the report as either a Preview report or a Stored report.

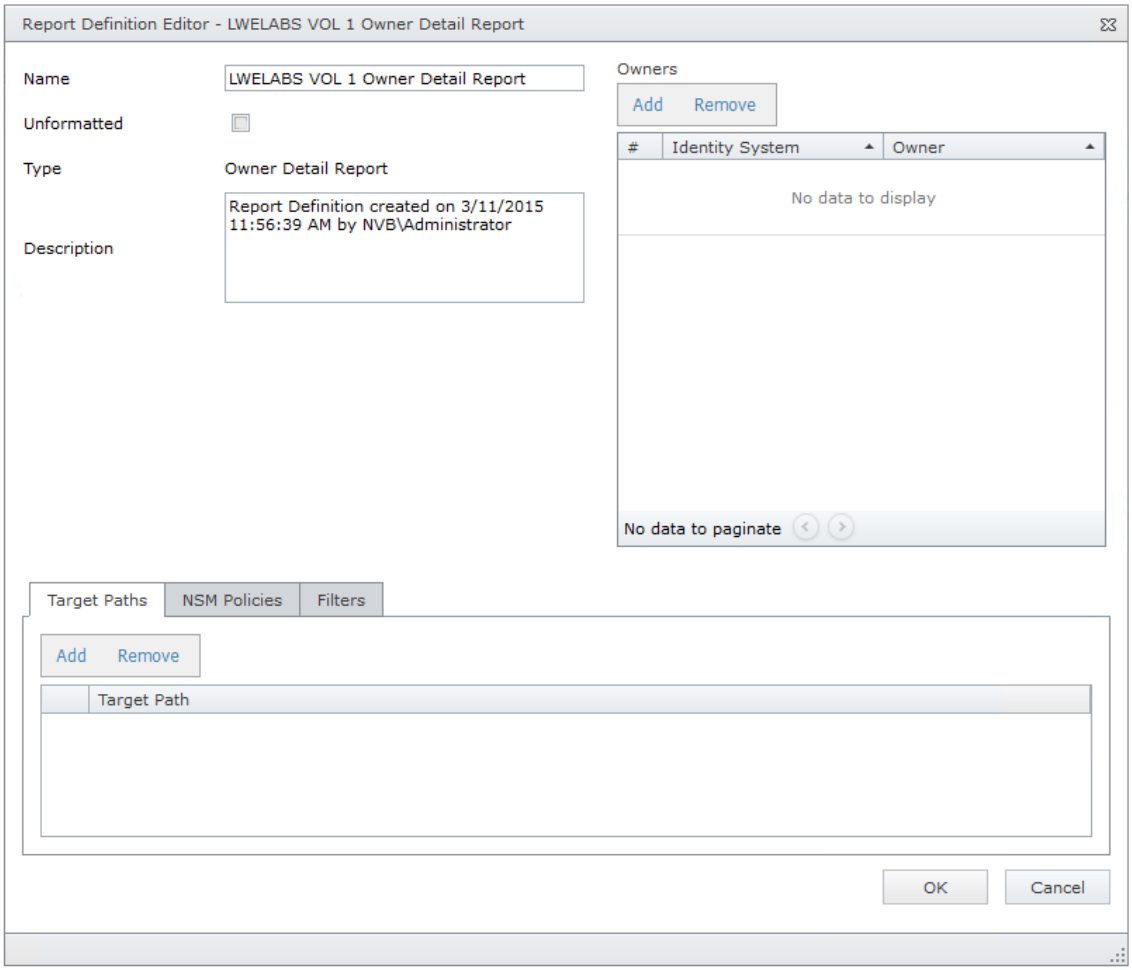
   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.
10. (Optional) Generate a Detailed report on an individual owner by clicking an owner’s name in the report.

6.6.4 Generating a Detailed Owner Report

A Detailed Owner report is similar to a standard Owner report, except you can specify the users you want information on.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Owner Detail* option and click *OK*.



5. In the *Owners* region, browse to and specify the owners you want in the report and click *OK*.
6. Browse to and specify the file paths you want included in the report and click *OK*.
7. (Optional) Click the *Filters* tab and set the filters for the report.

   For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.
8. Click *OK*.
9. Generate the report as either a Preview report or a Stored report.

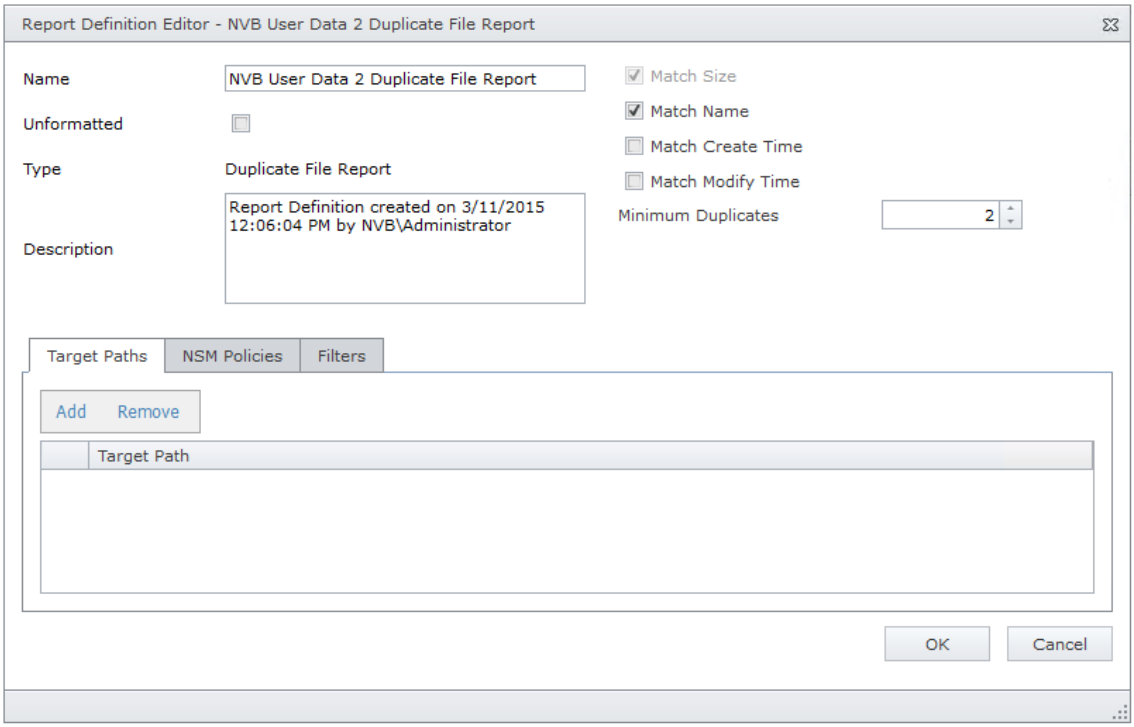
   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.6.5 Generating a Duplicate File Report

A Duplicate File report indicates duplicate versions of files being stored and their locations. A principle objective for any organization determined to limit network storage usage should be the elimination of duplicate versions of files.

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Duplicate File* option and click *OK*.



5. Use the check boxes and *Minimum Duplicates* field to specify the parameters for reporting.

   The more check boxes you select, the more likely it is that Novell File Reporter can identify definitive duplicate files.

   Match Name: Specifies that files reported must have duplicate names with other files.

   Match Create Time: Specifies that files reported must have duplicate file creation times with other files.

   Match Modify Time: Specifies that files reported must have duplicate file modification times with other files.

   Minimum Duplicates: Specifies the minimum number of duplicate files, according to the parameters selected above, for inclusion in the report.
6. Browse to and specify the file paths you want included in the report and click *OK*.
7. (Optional) Click the *Filters* tab and set the filters for the report.

   For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.
8. Click *OK*.

9 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

10 (Optional) Generate a Detailed report on a duplicate file by clicking a specific file name in the report.

6.6.6 Generating a Detailed Duplicate File Report

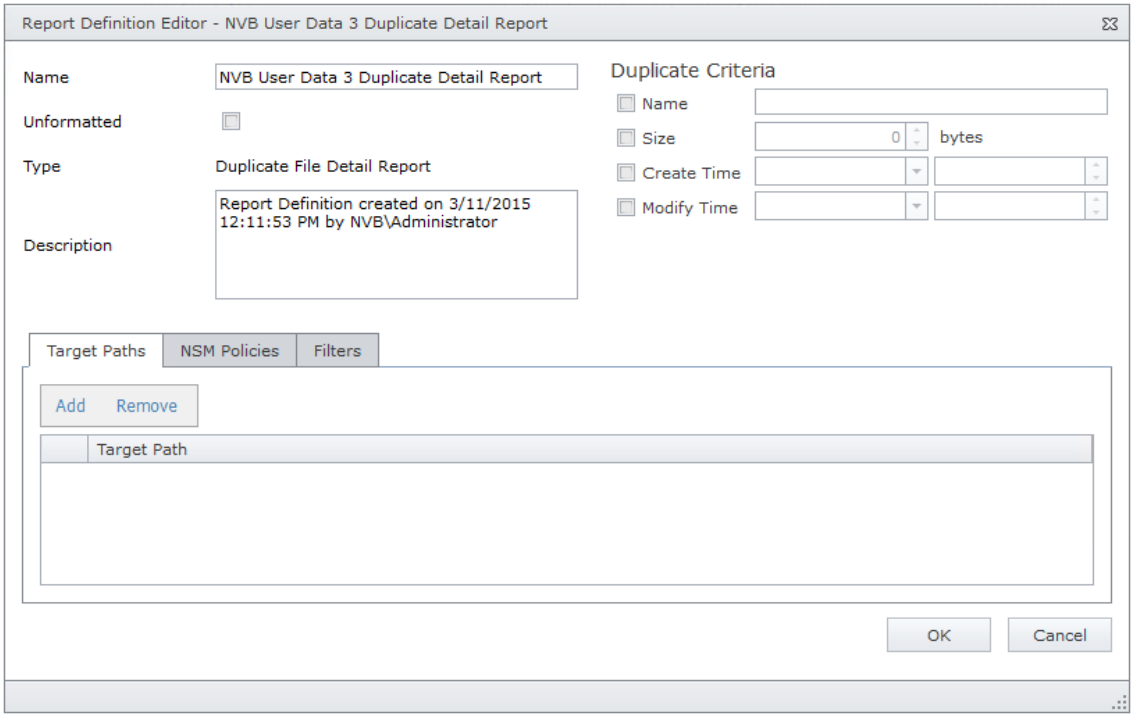
A Detailed Duplicate File report is similar to a standard Duplicate File report, except you can specify the exact filename to search for, along with exact create and modify times.

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Duplicate File Detail* option and click *OK*.



5 In the *Duplicate Criteria* region, specify the file name size, and the dates and times that the file was created or modified.

IMPORTANT: When specifying Create or Modify times, the time entered must be exact down to the second. If a date range is required, do not enable the Create or Modify criteria here, but use the date filters in the *Filters* tab. For more information on filters, see Appendix A, “Filtering,” on page 125.

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6 Browse to and specify the file paths you want included in the report and click *OK*.

7 (Optional) Click the *Filters* tab and set the filters for the report.

For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.

8 Click *OK*.

9 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.6.7 Generating a Date-Age Report

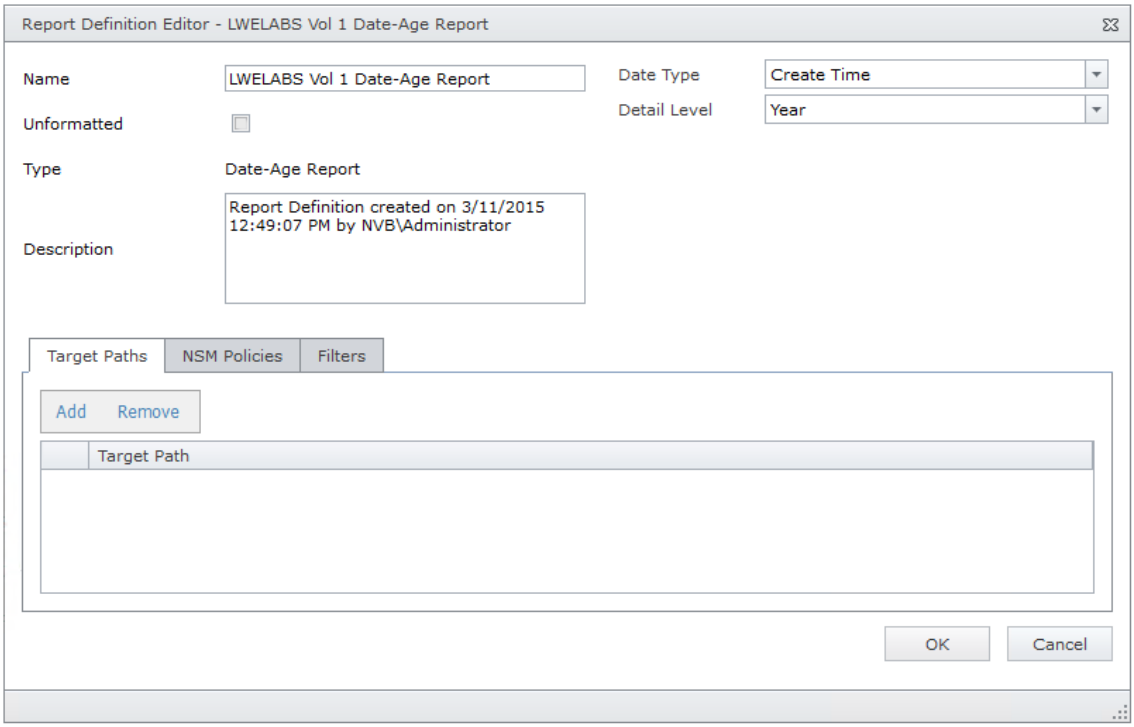
The Date-Age report presents file count data according to when files were created, last accessed, or last modified. You can use this report to help you determine which files have not been accessed for a given amount of time and then decide whether to delete, archive, or move those files to less expensive storage.

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Date-Age* option and click *OK*.



5 In the *Date Type* drop-down menu, select an option.

Create Time: Reports when files were created.

Modify Time: Reports when files were last modified.

Access Time: Reports when files were last accessed.

6 In the *Detail Level* drop-down menu, select an option.

Year: Groups the file count in the report according to the year they were created, last modified, or last accessed.

Month: Groups the file count in the report according to the month they were created, last modified, or last accessed.

Day: Groups the file count in the report according to the calendar date they were created, last modified, or last accessed.

7 Browse to and specify the file paths you want included in the report and click *OK*.

8 (Optional) Click the *Filters* tab and set the filters for the report.

For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.

9 Click *OK*.

10 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

11 (Optional) Generate a Detailed report by clicking a specific year, month, or date in the report.

Unlike the original Date-Age report that lists the data by file count, the generated Detailed report lists individual files.

6.6.8 Generating a Detailed Date-Age Report

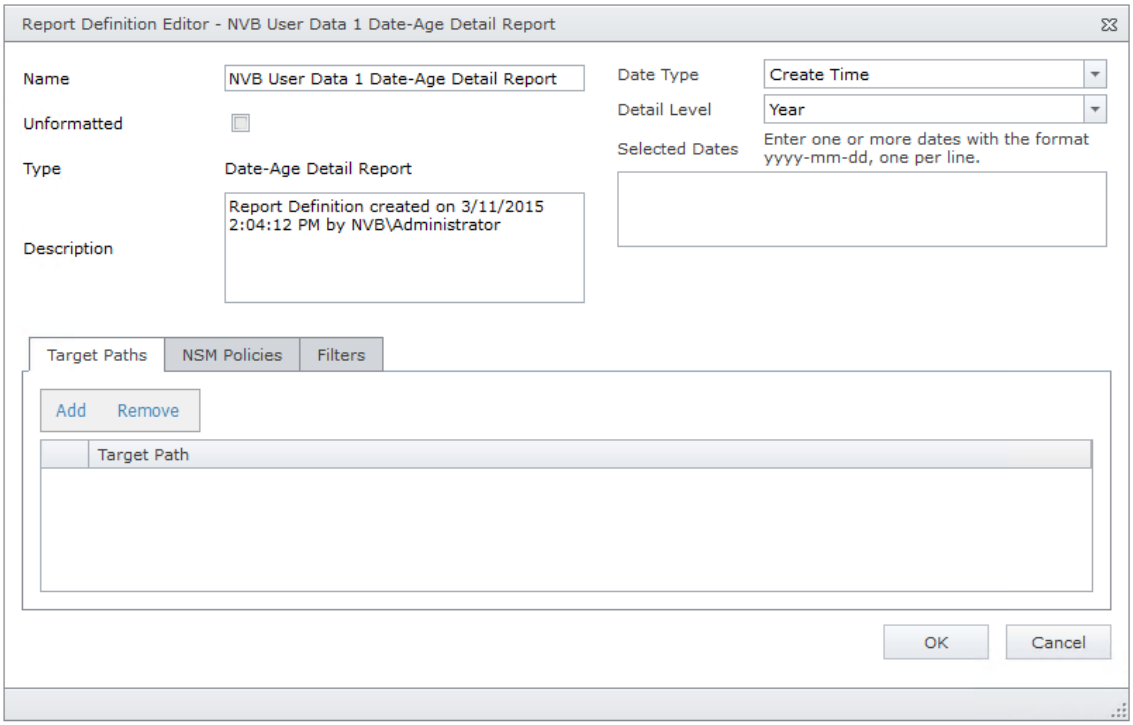
A Detailed Date-Age report is similar to a standard Date-Age report, except you can specify the exact create, modify, or access date parameters.

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Date-Age Detail* option and click *OK*.



5 In the *Date Type* drop-down menu, select an option.

Create Time: Reports when files were created.

Modify Time: Reports when files were last modified.

Access Time: Reports when files were last accessed.

6 In the *Detail Level* drop-down menu, select an option.

Year: Groups the file count in the report according to the year they were created, last modified, or last accessed.

Month: Groups the file count in the report according to the month they were created, last modified, or last accessed.

Day: Groups the file count in the report according to the calendar date they were created, last modified, or last accessed.

7 In the *Selected Dates* field, specify the dates you want.

This indicates that only the files created, last modified, or last accessed on those dates will be included in the report.

8 Browse to and specify the file paths you want included in the report and click *OK*.

9 (Optional) Click the *Filters* tab and set the filters for the report.

For information on using the filtering capabilities of Novell File Reporter, refer to Appendix A, “Filtering,” on page 125.

10 Click *OK*.

11 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.7 Historic Comparison Reports

Historic Comparison reports specify the differences between two similar scan types of the same target system. For example, if you had a Previous Permissions scan of a Windows share and a Current Permissions scan of the same share, you could generate a Historic NTFS Permissions Comparison report that would specify the differences in permissions between the two points in time that the scans were taken.

Historic Comparison reports can compare the following:

- Baseline scans to Previous scans
- Baseline scans to Current scans
- Historic scans to Current scans

Reports in this classification include Historic File System Comparison, Historic NCP Permissions Comparison, and Historic NTFS Permissions Comparison.

- Section 6.7.1, “Generating a Historic File System Comparison Report,” on page 79
- Section 6.7.2, “Generating a Historic NCP Permissions Comparison Report,” on page 81
- Section 6.7.3, “Generating a Historic NTFS Permissions Comparison Report,” on page 83

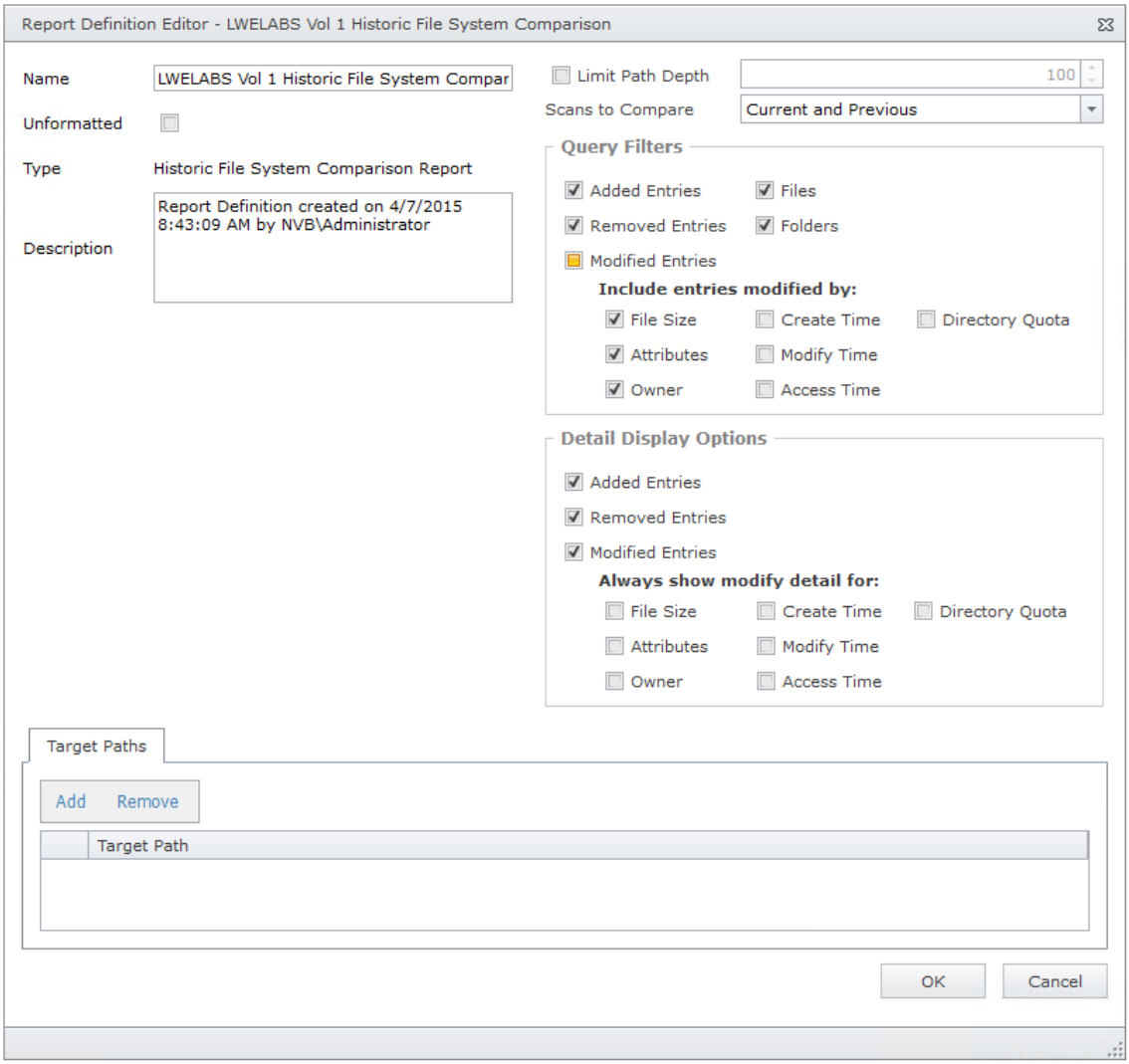
6.7.1 Generating a Historic File System Comparison Report

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Under *Historic Comparison*, select the *File System Comparison* option, then click *OK*.



5 (Conditional) If you want to limit the scope of the report to a set depth in the file structure, click the *Limit Path Depth* check box and specify the depth level.

For example, if you specify 3, the report lists the file contents of all file paths in the specified target paths up to 3 levels in the file structure.

If you do not specify a path depth, Novell File Reporter will report on all levels of the specified target path.

6 From the *Scans to Compare* drop-down menu, select one of the following options:

Current and Previous: Compares the Current scan of the storage resource to the Previous scan of the storage resource.

Current and Baseline: Compares the Current scan of the storage resource to the Baseline scan of the storage resource.

Previous and Baseline: Compares the Previous scan of the storage resource to the Baseline scan of the storage resource.

All options appear whether you have scans or not. If you do not have scans, Novell File Reporter will generate an empty report.

7 In the *Query Filters* region, specify whether to include the following metadata categories in the report:

Added Entries: If you want the report to list files or folders that have been added since the older scan, leave this check box selected.

Removed Entries: If you want the report to list files or folders that have been removed since the older scan, leave this check box selected.

Modified Entries: If you want the report to list files or folders that have been modified since the older scan, leave this check box selected.

Files: If you want the report to list files, leave this check box selected.

Folders: If you want the report to list folders, leave this check box selected.

8 In the *Include entries modified by:* region of the *Query Filters*, specify which of the attributes modified between the older and newer scan you want included in the report.

9 In the *Detail Display Options* region, identify whether to display the metadata categories specified below in the *Detail Data* section of the report.

The categories below pertain to the *Detail Data* section of the report only, and not the *Summary Data* section.

Added Entries: If you want the report to display this category, whether there are added entries to list or not, select this check box.

Removed Entries: If you want the report to display this category, whether there are removed entries to list or not, select this check box.

Modified Entries: If you want the report to display this category, whether there are modified entries to list or not, select this check box.

10 (Conditional) If you selected the *Modified Entries* check box, in the *Always show modify detail for:* region, select any of the category options you want displayed in the report *whether these metadata categories have been changed between the two scans or not*.

By default, the *Modified Entries* section of the report only shows metadata that has changed. The options in this region of the dialog box are to force the display of one or more particular metadata properties.

Any metadata for an entry that Novell File Reporter has determined has changed is displayed in bold font. Any optional data that has not changed is displayed in regular font.

11 Browse to and specify the file paths you want included in the report, then click *OK*.

12 Click *OK* to close the Report Definition Editor.

13 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

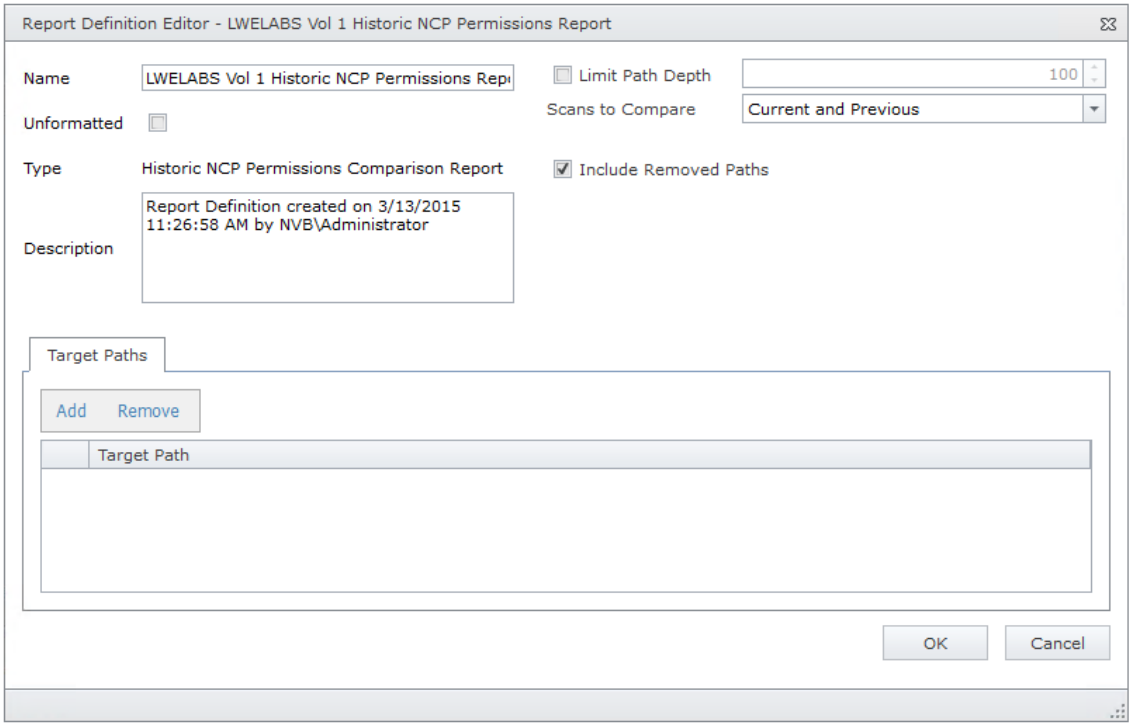
6.7.2 Generating a Historic NCP Permissions Comparison Report

1 Select *Reports* > *Report Definitions.*

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Historic NCP Permissions* option, then click *OK*.



5 (Conditional) If you want to limit the scope of the report to a set depth in the file structure, click the *Limit Path Depth* check box and specify the depth level.

   For example, if you specify 3, the report lists the permissions of file contents of all file paths in the specified target paths up to 3 levels in the file structure.

   If you do not specify a path depth, Novell File Reporter will report on all levels of the specified target path.

6 From the *Scans to Compare* drop-down menu, select one of the following options:

   Current and Previous: Compares the Current scan of the storage resource to the Previous scan of the storage resource.

   Current and Baseline: Compares the Current scan of the storage resource to the Baseline scan of the storage resource.

   Previous and Baseline: Compares the Previous scan of the storage resource to the Baseline scan of the storage resource.

   All options appear whether you have scans or not. If you do not have scans, Novell File Reporter will generate an empty report.

7 (Conditional) If you do not want the report to list any paths that have been deleted or removed, deselect the *Include Removed Paths* check box.

8 Browse to and specify the file paths you want included in the report, then click *OK*.

9 Click *OK* to close the Report Definition Editor.

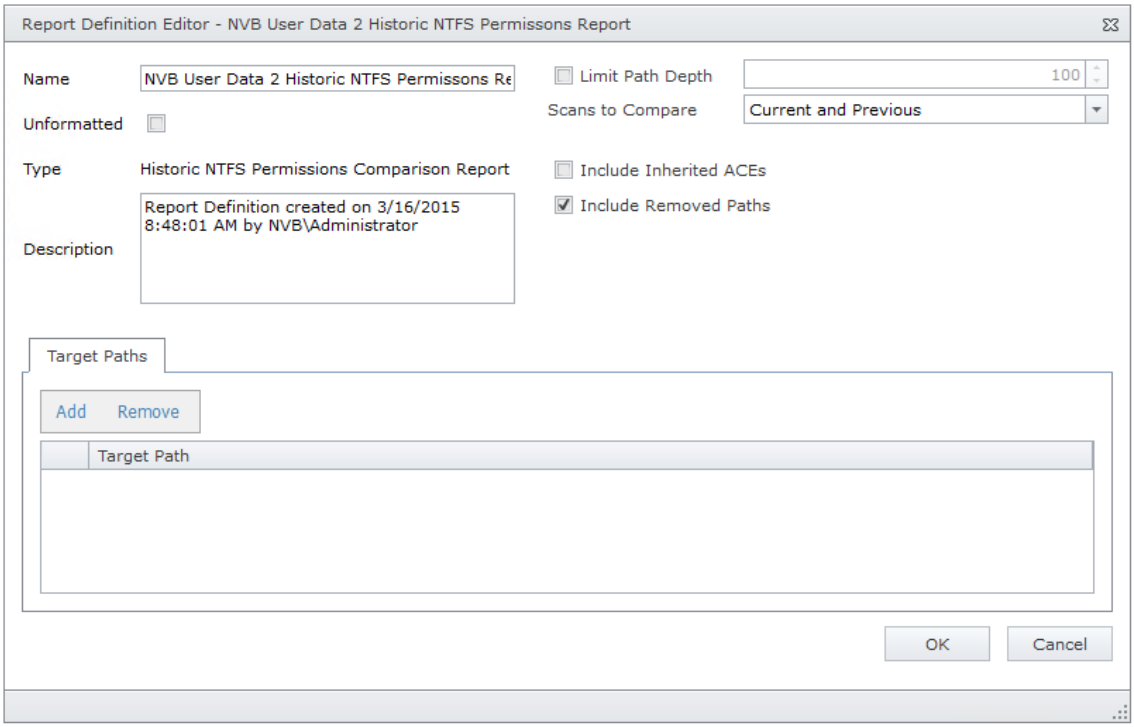
10 Generate the report as either a Preview report or a Stored report.

   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.7.3 Generating a Historic NTFS Permissions Comparison Report

1. Select *Reports* > *Report Definitions.*
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the *Historic NTFS Permissions* option, then click *OK*.



5. (Conditional) If you want to limit the scope of the report to a set depth in the file structure, click the *Limit Path Depth* check box and specify the depth level.

   For example, if you specify 3, the report lists the permissions of file contents of all file paths in the specified target paths up to 3 levels in the file structure.

   If you do not specify a path depth, Novell File Reporter will report on all levels of the specified target path.
6. From the *Scans to Compare* drop-down menu, select one of the following options:

   Current and Previous: Compares the Current scan of the storage resource to the Previous scan of the storage resource.

   Current and Baseline: Compares the Current scan of the storage resource to the Baseline scan of the storage resource.

   Previous and Baseline: Compares the Previous scan of the storage resource to the Baseline scan of the storage resource.

   All options appear whether you have scans or not. If you do not have scans, Novell File Reporter will generate an empty report.
7. (Conditional) If you want your report to include not only direct permissions, but inherited permissions, select the *Include Inherited ACEs* check box.

   Reporting inherited permissions could make the report significantly larger.

8 (Conditional) If you do not want the report to list any paths that have been deleted or removed, deselect the *Include Removed Paths* check box.

9 Browse to and specify the file paths you want included in the report, then click *OK*.

10 Click *OK* to close the Report Definition Editor.

11 Generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.8 Trending Report

Currently, the only report in this classification is the Volume Free Space report. Before generating a Volume Free Space report, you must first conduct a Volume Free Space scan on the volumes or shares you want to report on.

6.8.1 Generating a Volume Free Space Report

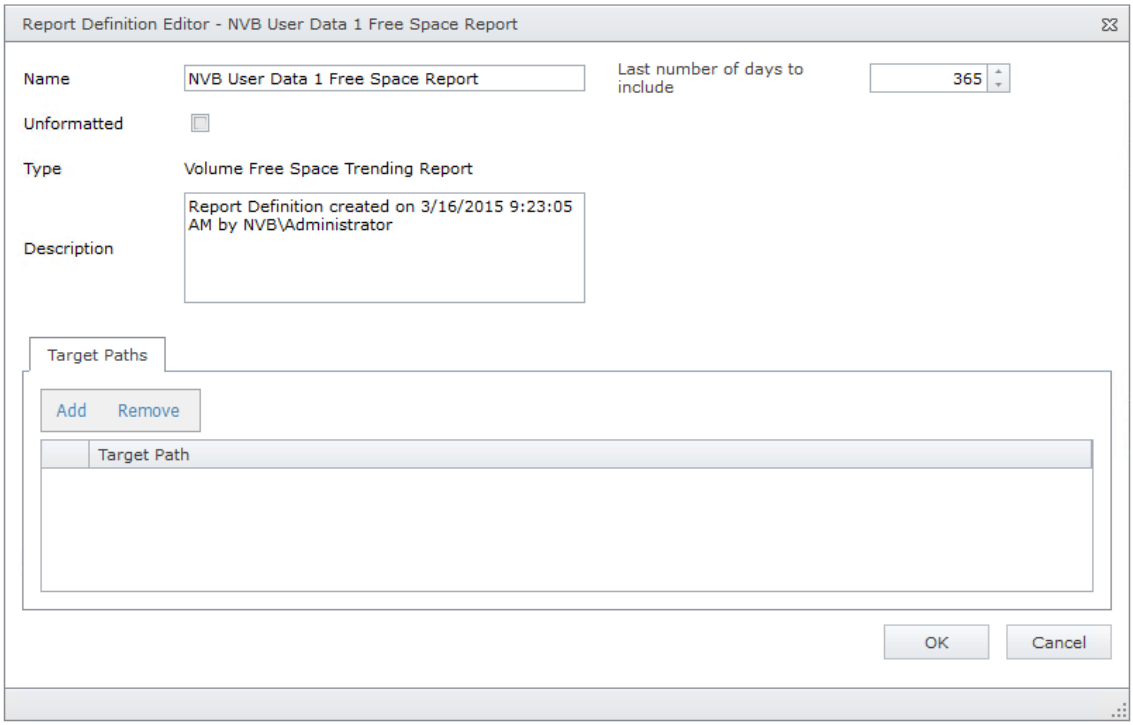
The Volume Free Space report lets you view available volume or share disk space over a set amount of time. For best results, you should conduct regularly scheduled Volume Free Space scans on specific volumes and shares. Novell File Reporter then has the data it needs to graph the pattern of free space on the volume or share.

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name of the report definition.

4 Select the *Volume Free Space* option and click *OK*.



5 In the *Last number of days to include* field, specify the last number of days you want the report to include.

   For example, if you want the report to graph the last month, enter 30.

   The lowest number you can specify is 7.

6 Browse to and specify the volumes or shares you want included in the report and click *OK*.

7 Click *OK*.

8 Generate the report as either a Preview report or a Stored report.

   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.9 Custom Query Reports

Custom Query Reports are reports that are generated through a series of SQL commands that you enter. These commands enable you to generate very specific detail in reports that are not available through the built-in report types in Novell File Reporter.

The SQL commands must be specific to the database (Microsoft SQL Server or PostgreSQL) that your deployment of Novell File Reporter is utilizing.

NOTE: For details and examples of the supported database functions, tables, and views that you can utilize in Custom Query reports, refer to the *Novell File Reporter 2.6 Database Schema and Custom Queries Guide*.

SQL commands are entered through report editors available from the Novell File Reporter browser-based administrative interface and from the Report Designer client tool.

NOTE: For details on using the report editor in the Report Designer, see Section 8.4, “Designing a Custom Query Report,” on page 106.

TIP: Don't forget to utilize File Query Cookbook as a resource for obtaining SQL commands and sample report layouts that have been submitted by the Novell File Reporter community. Both the SQL commands and report layouts can be customized as needed.You can access the File Query Cookbook directly through the Report Designer interface, or at http://www.filequerycookbook.com. (http://www.filequerycookbook.com.)

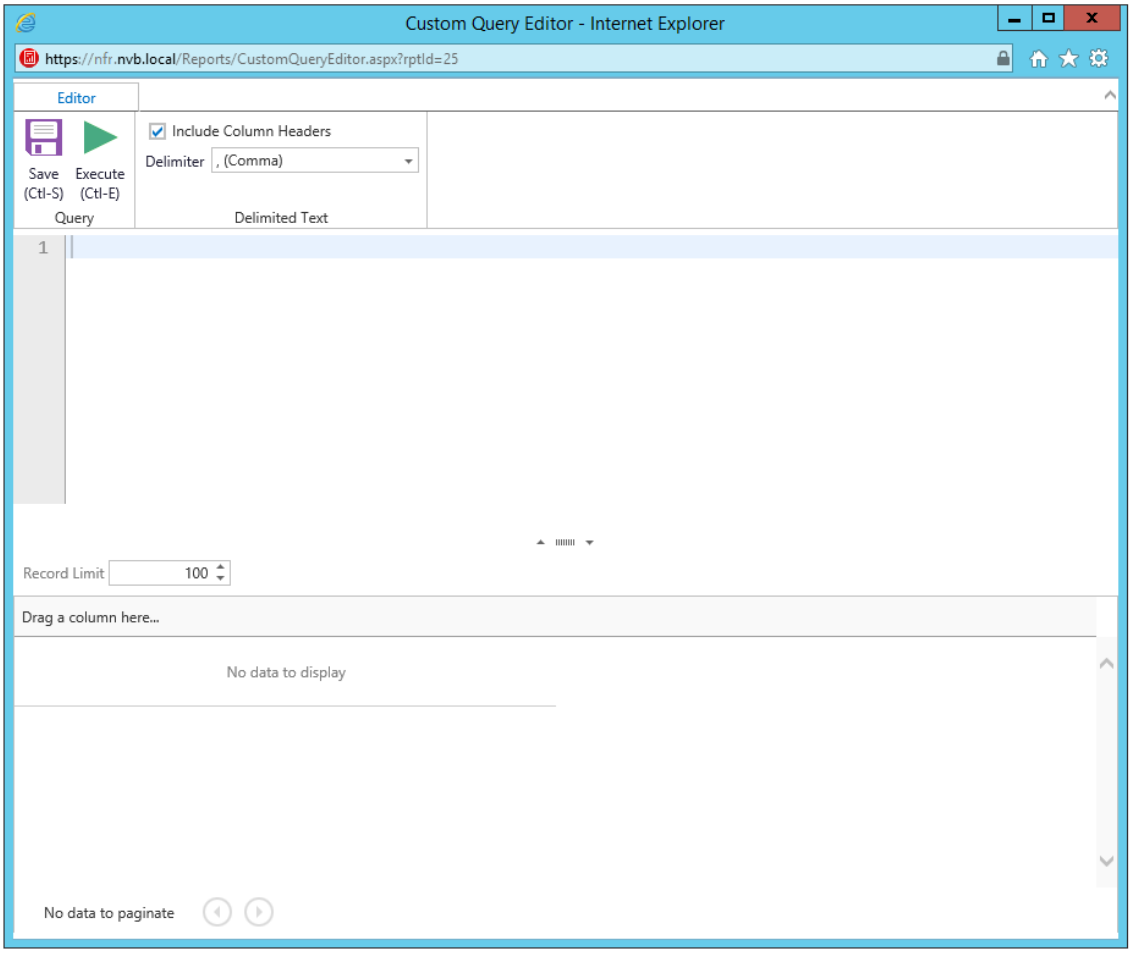
---

1 Select *Reports* > *Report Definitions*.

2 Click *Add*.

3 In the *Name* field, specify a descriptive name for the report definition.

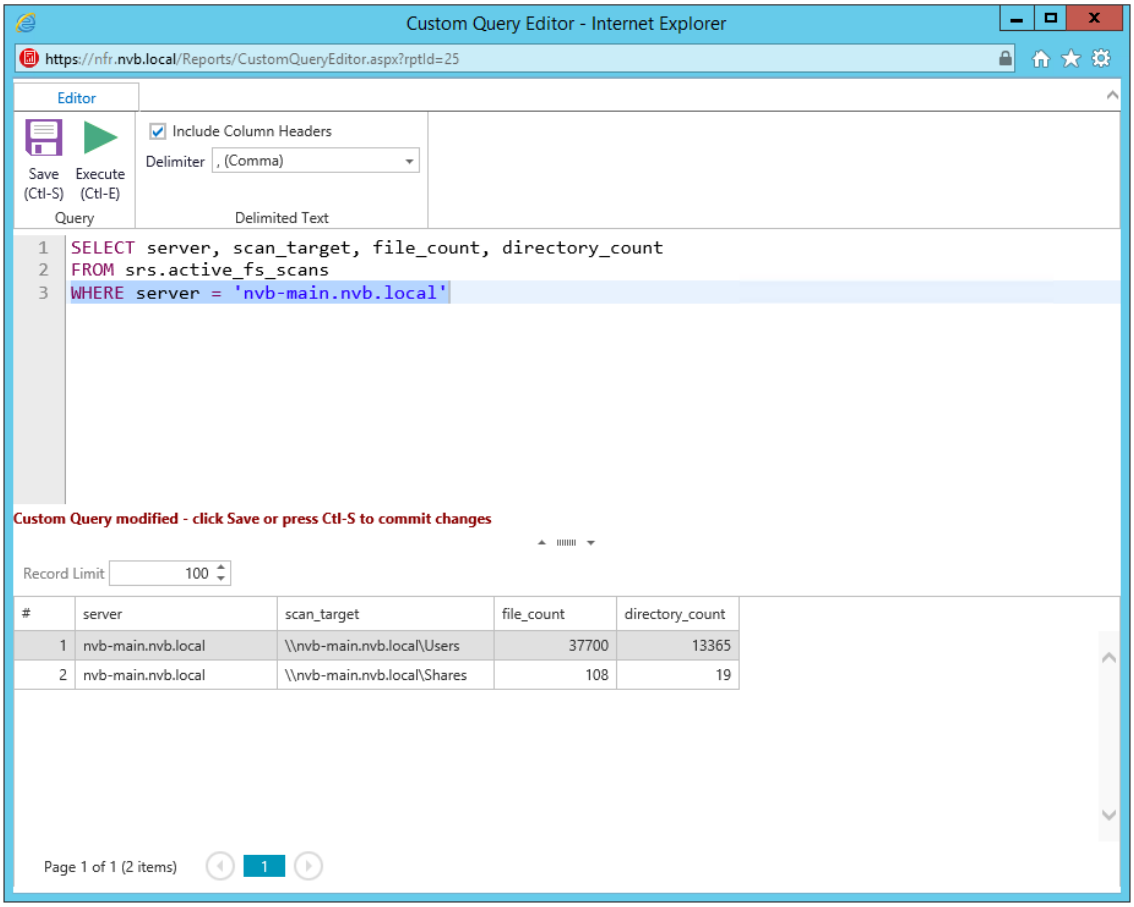
4 Select *Custom Query Report*.



5 Enter the SQL commands according to what information you want included in your report.

As you enter commands, you can click *Execute* to get a preview in the bottom portion of the editor of how the report will appear.

The *Row Limit* setting does not limit the size of the report. Instead, it limits the how much can be previewed.



6 When you are satisfied with the report and the previewed results, click *Save*.

7 Close the Custom Query Report Editor.

8 Select *Reports* > *Report Definitions*.

9 Select the Custom Query Report you just saved and generate the report as either a Preview report or a Stored report.

For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.

6.10 Unformatted Reports

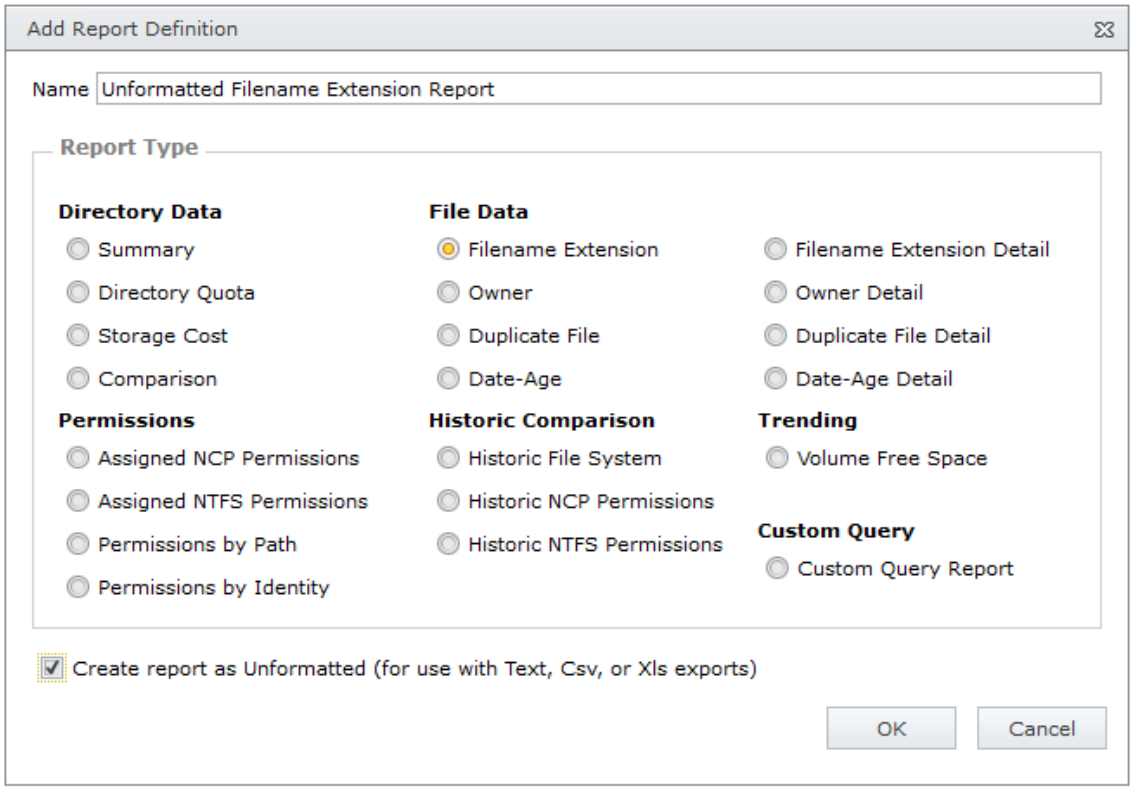
Novell File Reporter allows you to generate unformatted reports. In some instances, having an unformatted report might be useful for doing extensive sorting and filtering of the report data using a product such as Microsoft Excel.

Novell File Reporter can generate an unformatted report for all built-in report types except for Summary reports.

You can generate unformatted reports by selecting the option in the Add Report Definition dialog box or by selecting the Unformatted check box in the Report Definition Editor dialog box.

6.10.1 Generating Unformatted Reports

1. Select *Reports* > *Report Definitions*.
2. Click *Add*.
3. In the *Name* field, specify a descriptive name of the report definition.
4. Select the report type you want to generate.
5. Select *Create report as Unformatted*.



6. Click *OK*.
7. In the Report Definition Editor, specify the settings and the file paths you want included in the report, then click *OK*.
8. Click *OK*.
9. Generate the report as either a Preview report or a Stored report.

   For procedures on generating a Preview report, see “Generating a Preview Report” on page 59.

   For procedures on generating a Stored report, see “Generating a Stored Report” on page 61.
10. From the file type drop-down menu, select either *XLS*, *XLSX*, *Text*, or *CSV*.
11. Click the *Export a Report and Save it to the Disk* button.
12. Select *Save File* and click *OK*.

6.11 NSM Policy Reports

In most reports, you browse to and specify a file path for the report through the *Target Paths* tab. If you have Novell Storage Manager managing your organization's user and collaborative storage, you can have Novell File Reporter report on the storage according to the target paths of the Novell Storage policies, rather than through a specific file path.

IMPORTANT: Novell File Reporter 2.6 requires that you upgrade to Novell Storage Manager 3.1 or above.

The advantages to specifying an NSM policy rather than a file path is that an NSM policy can include many different target paths. For example, in a large organization that utilizes Novell Storage Manager's load balancing capabilities, a single NSM policy might have 10 or more target paths. If you chose to specify the paths through the *Target Paths* tab, you would need to list all 10 paths. But if you have each of the target paths listed in a single NSM policy, through the *NSM Policies* tab, all you need to do is add the single NSM policy.

Another important advantage is that Novell File Reporter reads the associated policy target paths each time a report is generated, so that it dynamically responds to changes in assigned target paths for NSM policies.

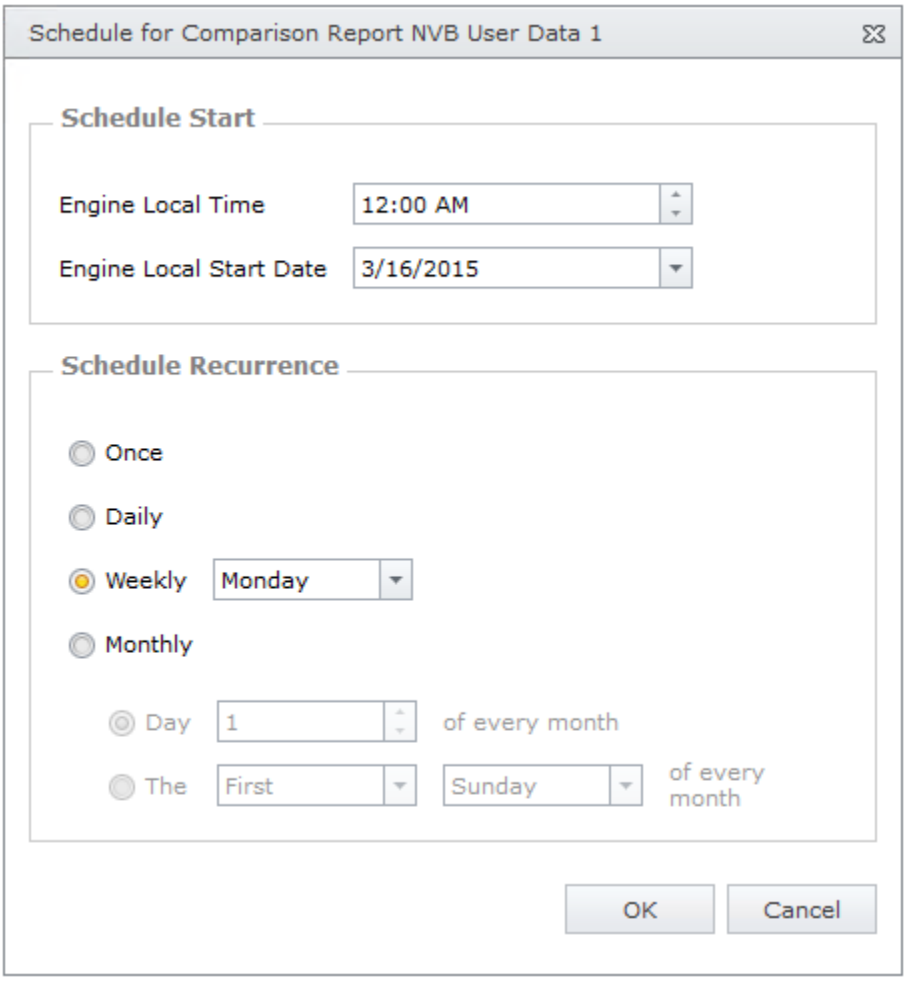
NOTE: Procedures for integrating Novell File Reporter with Novell Storage Manager are included in Section 4.5, "Integrating with Novell Storage Manager," on page 36.

You can specify NSM policies for all Novell File Reporter reports with the exception of Comparison reports, Permissions by Identity reports, and Volume Free Space reports.

6.12 Scheduling Reports

You can generate reports on a one-time or regularly scheduled basis.

1. Select *Reports* > *Report Definitions*.
2. From the list of report definitions, select one that is not scheduled.
3. Select *Schedule* > *Edit Schedule*.



Engine Local Time: Specify the time that you want the report to generate.

The time you select should be based on the time zone where the NFR Engine is located and not the workstation where you are accessing the Web application.

Engine Local Start Date: Specify the date when you want the report schedule to take effect.

Be aware that entering a date does not mean that the report generates on that date. If the Engine Local Start Date is set for today, which is a Monday, but the Schedule Recurrence setting is set for Weekly on Sunday, the report does not generate until Sunday.

Once: Select this option to schedule the report to be generated only once.

Daily: Select this option to schedule the report to be generated daily.

Weekly: Select this option and specify a weekday to generate the report.

Monthly: Select this option and specify a day to generate the report each month.

4 Specify the scheduling parameters and click *OK*.

The new schedule is displayed in the *Schedule* column of the Report Definitions page.

6.13 Editing a Scheduled Report

1 Select *Reports* > *Report Definitions*.

2 From the list of report definitions, select one whose schedule you want to edit.

3 Select *Schedule* > *Edit Schedule*.

4 Make the schedule changes you want.

5 Click *OK*.

6.14 Clearing a Schedule on a Scheduled Report

1 Select *Reports* > *Report Definitions*.

2 From the list of report definitions, select one whose schedule you want to clear.

3 Select *Schedule* > *Clear Schedule*.

4 When the confirmation screen appears, click *Yes*.

The status of the report definition appears in the *Schedule* column as *Not Scheduled*.

6.15 Copying a Report Definition

To save time in creating a new report definition and its associated properties, you can copy an exiting report definition.

When you copy a built-in report, the following properties are included:

- Report Parameters
- Report Targets Paths
- Report Identity Targets
- Filters
- NSM Policies

When you copy a Custom Query report, the following properties are included:

- SQL Query
- Report Layout

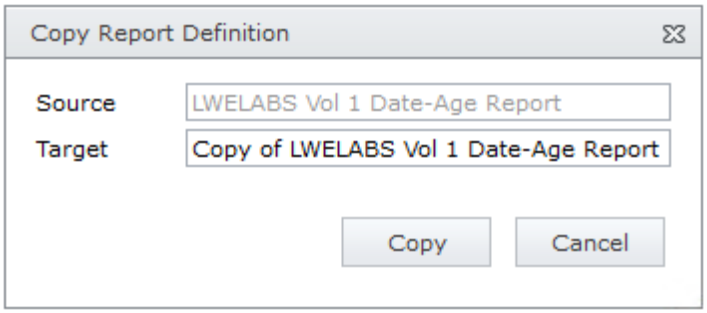
NOTE: Copying a report definition does not copy the content in the *Description* field, nor does it copy the report schedule.

---

1 Select *Reports* > *Report Definitions.*

2 From the list of report definitions, select one that you want to copy.

3 From the taskbar, click *Copy*.

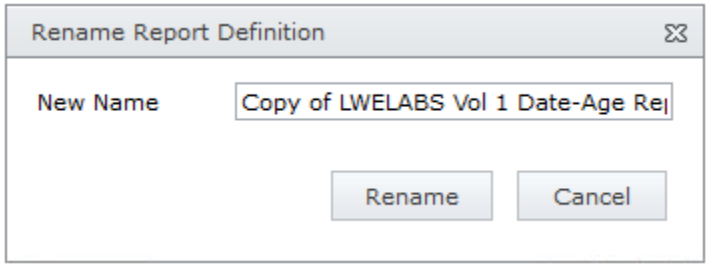


4 Click *Copy*.

   The new report definition is added to the list of report definitions with the name *Copy of* preceding the name of the original report definition.

5 Select the copy of the report definition.

6 From the taskbar, select *Rename*.



7 In the *New Name* field, specify a name for the new report definition, then click *Rename*.

8 From the taskbar, select *Schedule* > *Edit Schedule*.

9 Set the scheduling parameters for the new report definition, then click *OK*.

10 From the taskbar, click *Edit*.

11 In the *Description* field, enter a new description.

12 Click *OK* to save the report definition parameters.

6.16 Viewing Reports in Progress

When you generate large reports, you can view the progress in the Reports in Progress page.

1 Select *Reports* > *Reports in Progress*.

2 Click *Refresh*.

   When the report disappears from the list, the report generation has completed.

6.17 Troubleshooting Reports

If there is potential for a reporting problem, Novell File Reporter provides notifications to help resolve the issue. The following points might also be helpful.

1 Verify that a scan exists for the storage resources you want to report on.

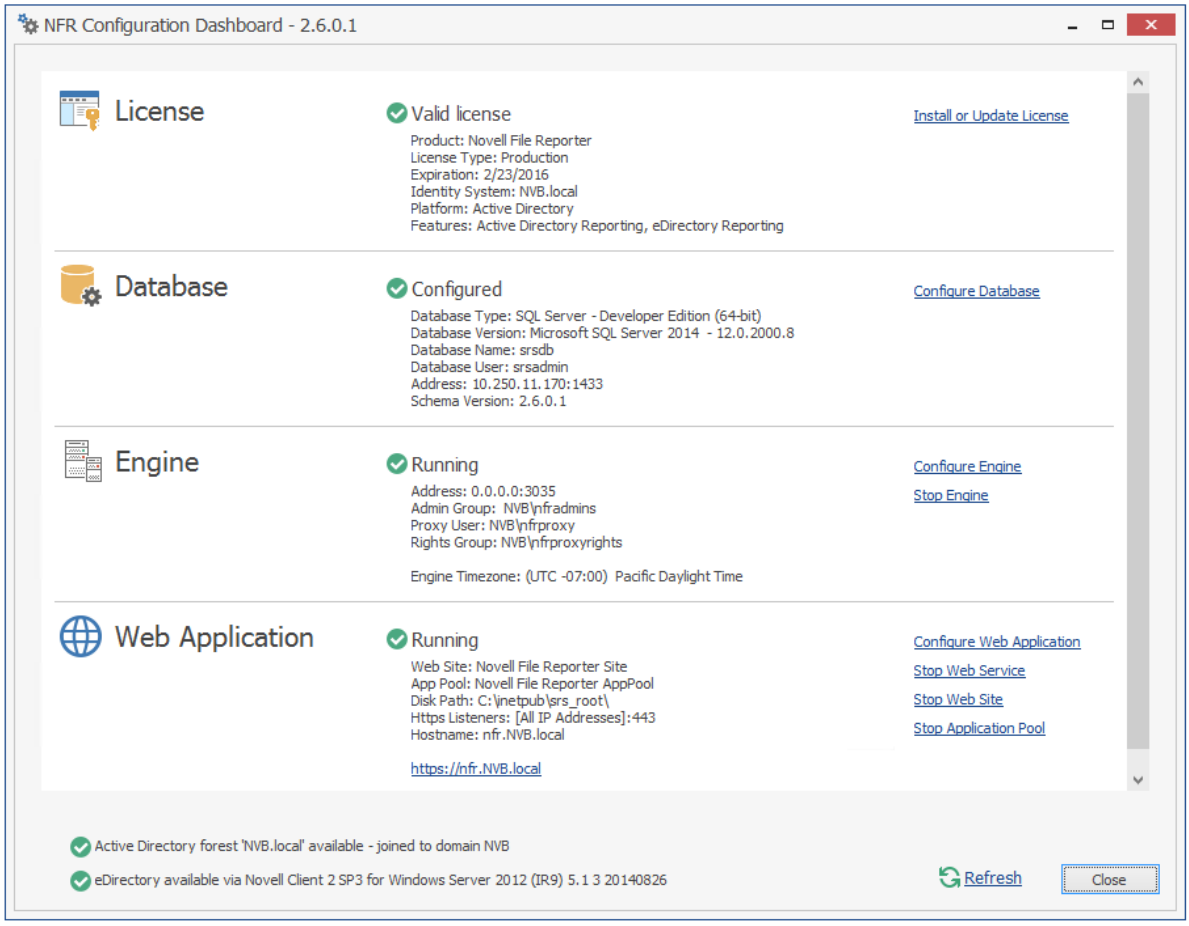
2 If your reports include too much data to be useful, narrow the scope of the report by implementing filters. For more information, see Appendix A, “Filtering,” on page 125.

7 Performing Other Administrative Tasks

This section provides procedures for performing administrative tasks not covered in the previous sections.

7.1 Stopping and Restarting Services

Use the Configuration Dashboard to stop and restart the NFR Engine, Web Application, Web Service, Web Site, and Application Pool.

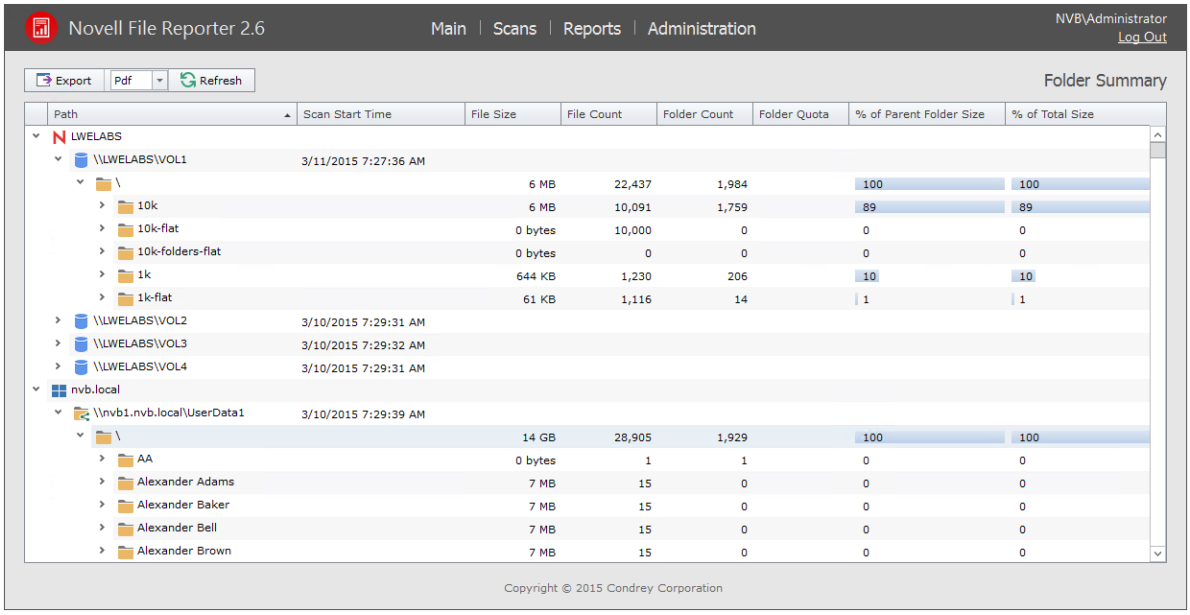


7.2 Using Folder Summary

The Folder Summary feature provides you a visual folder structure according to the latest scanned file system data. Folder Summary also provides extensive summary information for the folders and files.

You can access Folder Summary by selecting *Reports* > *Folder Summary*.

Figure 7-1 *Folder Summary*



You can print, save, or export the data as a PDF or XLS file.

7.3 Considerations for Reporting on NAS Devices

In Active Directory network environments, Novell File Reporter can report on the contents of Network Attached Storage (NAS) devices through an NFR Agent proxy assignment. Integration information for reporting on specific NAS device types is found below.

- Section 7.3.1, “EMC Celerra,” on page 94
- Section 7.3.2, “NetApp filer,” on page 95
- Section 7.3.3, “EMC Isilon and Other NAS Devices,” on page 95

7.3.1 EMC Celerra

For an EMC Celerra NAS device, configuration is similar to configuring a server in the domain to be managed by a proxy agent.

1. Join the NAS device to a domain where Novell File Reporter can report from.
2. Grant the proxy rights group membership in the NAS device's built-in Administrators group.

3 Grant the proxy rights group the folder share and NTFS permissions that are required to access the storage.

4 Grant the LSA rights and privileges to the proxy rights group, except the rights and privileges that don't exist on the EMC Celerra NAS device.

7.3.2 NetApp filer

For a NetApp filer device, configuration is very simple because the device does not fully emulate a Windows Server at the operating system level.

1 Use the NetApp filer administration utility to join the NAS device to a domain where Novell File Reporter can report.

2 Grant the proxy rights group membership in the NAS device's built-in Administrators group.

3 Grant the proxy rights group the folder share permissions that are required to access the storage.

There are no LSA rights and privileges to grant on a NetApp filer NAS device.

7.3.3 EMC Isilon and Other NAS Devices

Perform the following steps to integrate an EMC Isilon device. You can use these same steps to see if other NAS devices integrate with Novell File Reporter.

1 In the associated Computer object in Active Directory, add the following text somewhere in the description attribute for that object:

```
***SRGenericNASDevice***
```

2 Rebuild the storage resources and verify that the NAS device is displayed on the list.

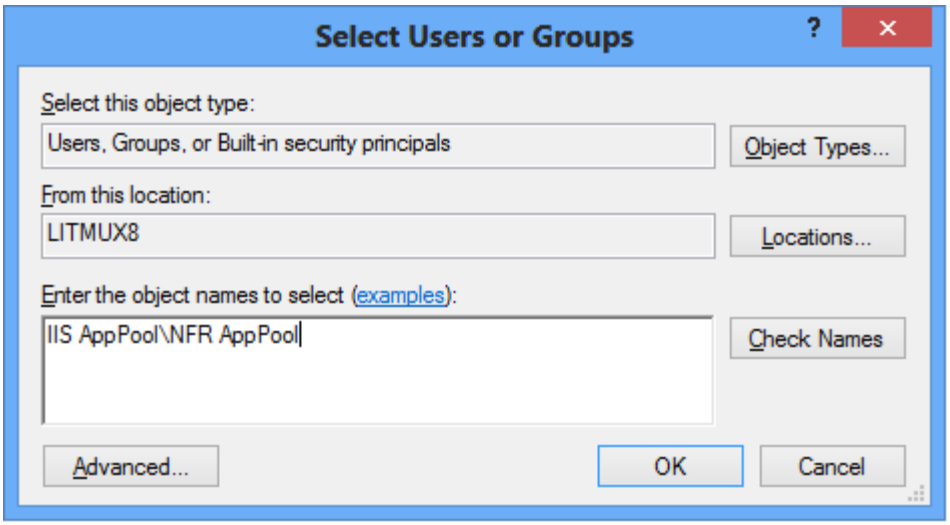
3 Perform any needed steps for giving the proxy rights group access to the desired shares and folders on the NAS device.

7.4 Changing the Default Path for Stored Reports

The default path for stored reports is established during the installation of the NFR Engine. If you want to change the file path, you can do so if the new path is on the server hosting the NFR Engine and Web application.

Because both the Web application and the NFR Engine via the Stored Reports DLL need access to the report files, the service accounts those processes run as must have both Read and Write access to the specified path. For the Engine, this is the Windows Proxy Account; for eDirectory (or the “service account” when running in eDirectory mode) and for the Web Application, this is the associated IIS AppPool Identity, which is a hidden account created by Windows and tied to the Application Pool when the Web service was configured.

If you create a new folder for the stored reports, you must assign Read and Write access for the associated Windows server/proxy account to that folder, as well as the AppPool Identity. Because you cannot browse for the AppPool Identity, you need to use the name of the AppPool itself:



Novell File Reporter does not move previously generated reports to the new location.

1. Select *Administration* > *Stored Reports Configuration*.
2. In the *Stored Reports Folder* field, specify a new path.
3. Click *Save Changes*.

7.5 Changing the Life Span of Stored Reports

By default, stored reports are available for access for 30 days. You can adjust this setting by following the procedures below.

NOTE: You can always save a Preview or Stored report locally so it remains accessible indefinitely.

---

1. Select *Administration* > *Stored Reports Configuration*.
2. In the *Default Expiration* field, adjust the setting.
3. Click *Save Changes*.

7.6 Resetting the Proxy User Password

If the proxy user password is not working, you can reset it through the NFR Engine Configuration Utility. As part of the configuration process, it resets the proxy user password.

7.7 Changing the Report Data Font

Due to limitations of font encoding in PDF files, you might need to specify an alternate report data font. Locales that have multi-byte characters or characters outside the Latin-1 set of characters supported by the default font are especially at risk.

If you know the collected data is limited to a specific locale or language, choose a font that properly displays all characters for that locale or language.

If the collected data might contain characters that span multiple locales or that include both multi-byte and Latin-1 characters, for example, choose an appropriate Unicode Font that can accurately display most characters from the Unicode set and not just a specific locale.

Two Unicode fonts known for having both good Unicode character coverage and good glyph presentation are MS Arial Unicode (a sans-serif font) and CODE2000 (a serif font).

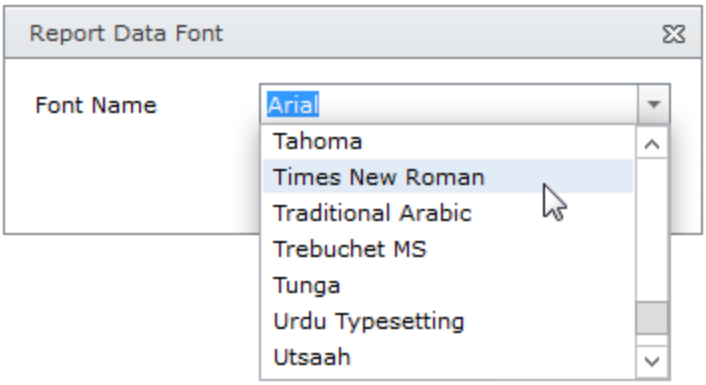
For more information on these fonts and on Unicode fonts in general, see (http://en.wikipedia.org/wiki/Unicode_font).

NOTE: You can change the data font to any font that is available on the server hosting the Web Application.

Headers and parameters in the reports remain in the default Arial font.

To change the report data font:

1. From the *Reports* menu, select *Report Definitions.*
2. From the *Report Branding and Styling* drop-down menu, select *Report Data Font*.
3. From the *Report Data Font Name* drop-down menu, select the font you want displayed in the report.



4. Click *Save*.

8 Using the Client Tools

The Novell File Reporter Client Tools provide client-based reporting capabilities along with advanced reporting design options currently unavailable through the browser-based administrative interface. These tools include the Report Viewer and the Report Designer.

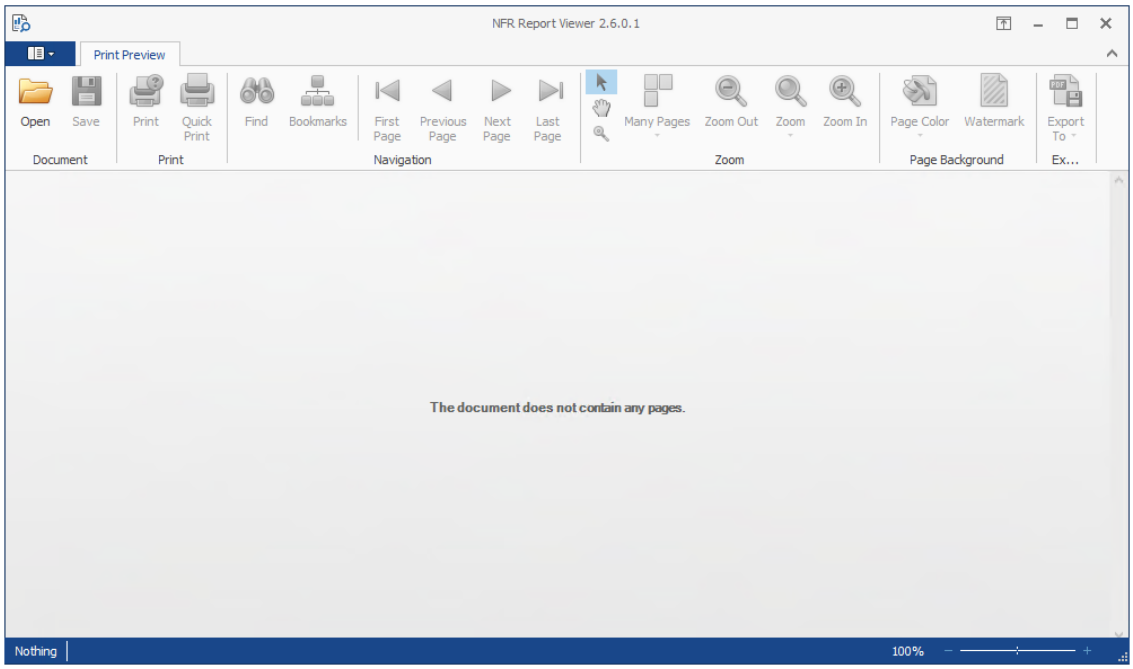
8.1 Using the Report Viewer

This tool allows you to view all stored reports locally from a Windows workstation. Because the Report Viewer utilizes the resources of the Windows workstation, rather than those of the NFR Engine, the Report Viewer can display stored reports much faster in most instances.

NOTE: You must be a member of the nfrreportusers group to view reports using the Report Viewer. The name nfrreportusers is the default name (which you can change) of the Novell File Reporter report users group created during the installation of the NFR Engine.

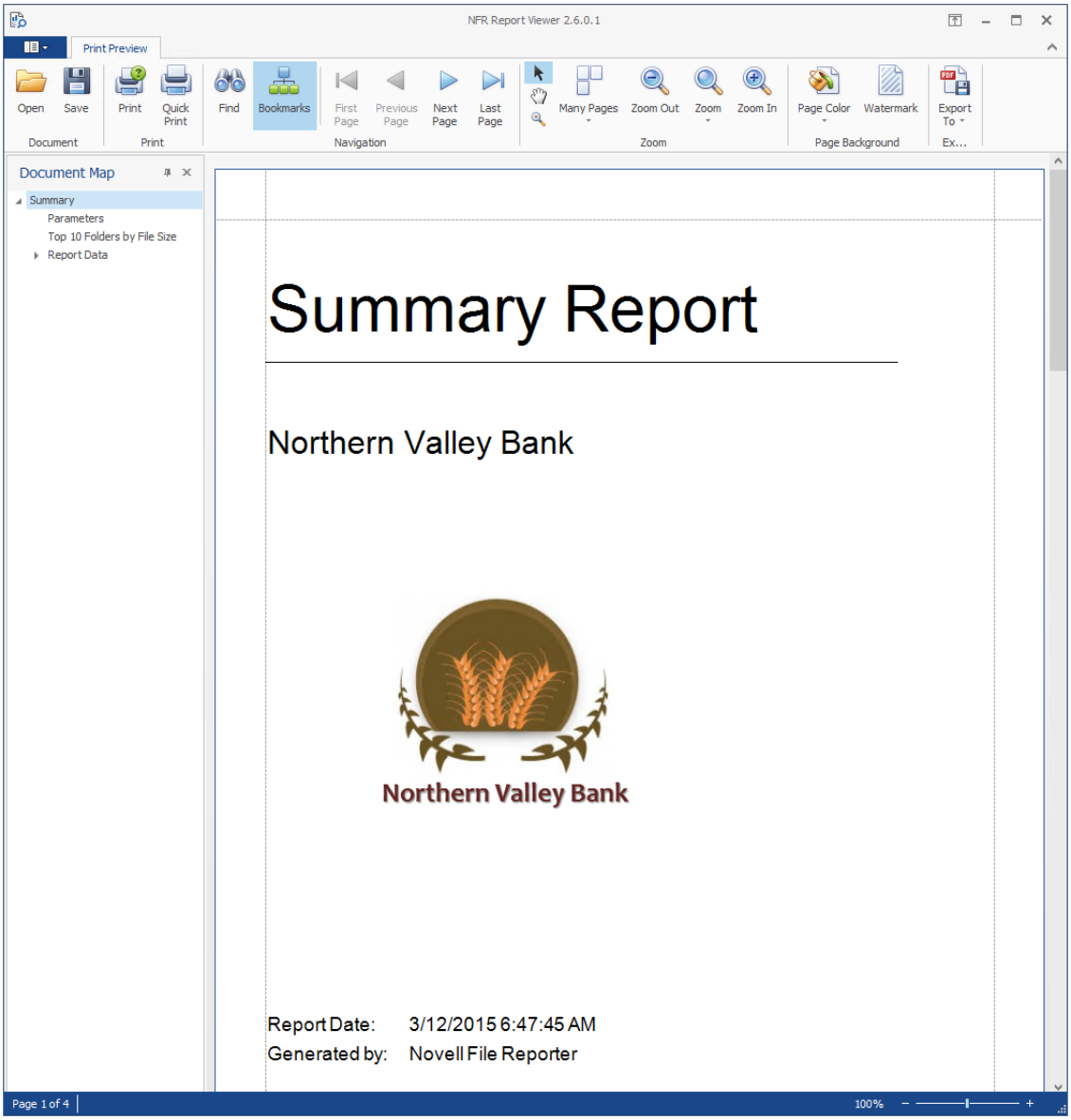
In comparison to the viewing capabilities of the browser-based administrative interface, the Report Viewer offers more capabilities. For example, with the Report Viewer you can change the visual display parameters of the report.

1 Launch the Novell File Reporter File Viewer application.



2 Click *Open*, browse to the location of your stored reports, then click *Open*.

To determine where stored reports are located, in the Novell File Reporter administrative interface, select *Administration* > *Stored Reports Configuration* and view the location in the *Stored Reports Folder* field.



3 (Optional) Adjust the view to your preferences using the tools discussed below.

Bookmarks: Click to toggle between the report *Document Map* being displayed and not displayed.

Many Pages: Click to specify the number of pages you want displayed.

Zoom Out: Click to see more of the report page at a reduced size.

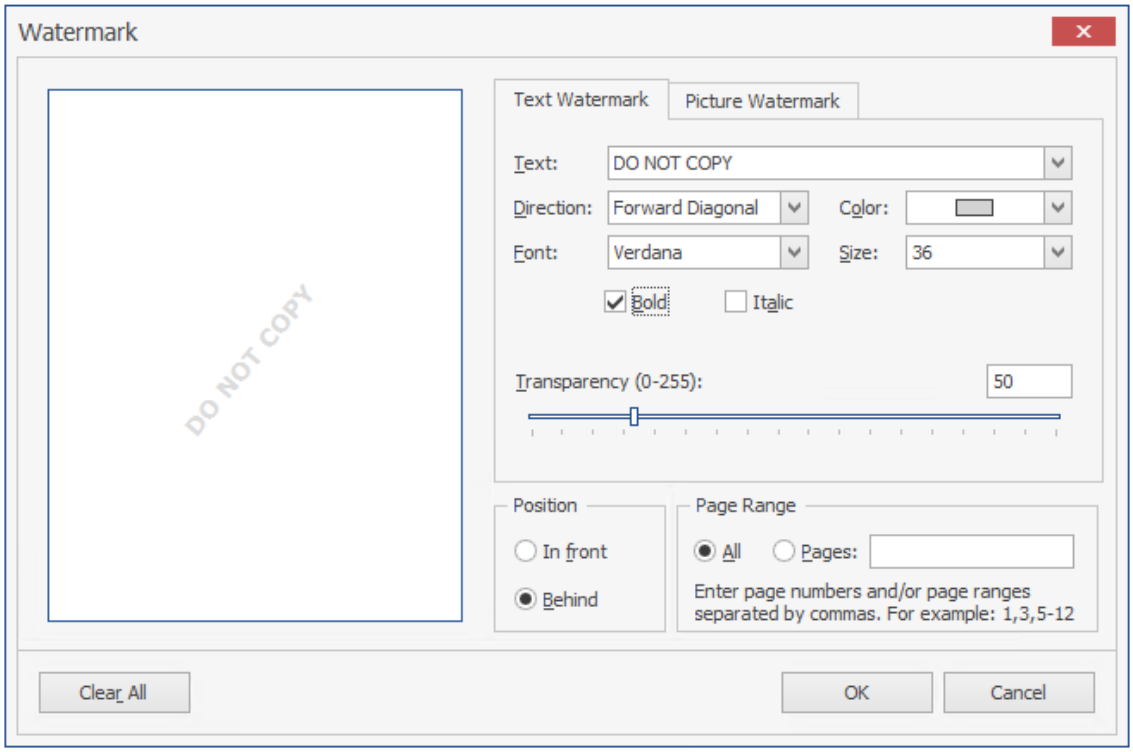
Zoom: Click to change the zoom level of the report preview.

Zoom In: Click to get a close-up view of the report.

Page Color: Click to change the color for the background of the report pages.

Watermark: Click to insert a ghosted text or image behind the content of each page of the report. A watermark is often used to indicate how a document is to be treated specifically.

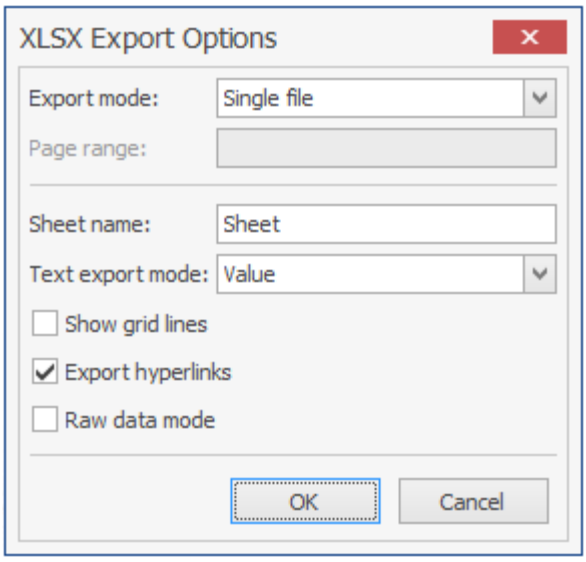
The Watermark dialog box lets you specify your watermark settings. Your watermark can either be in text or graphic form.



4 (Optional) Save the Report using the tools discussed below.

Save: Click to save the report. The report is saved as a `.PNRX` file, meaning that in this format, the report can only be opened through the Report Viewer.

Export To: Click to export the report to a new format. Each selected format option brings up a dialog box where you can provide specifics on how you want the report exported.

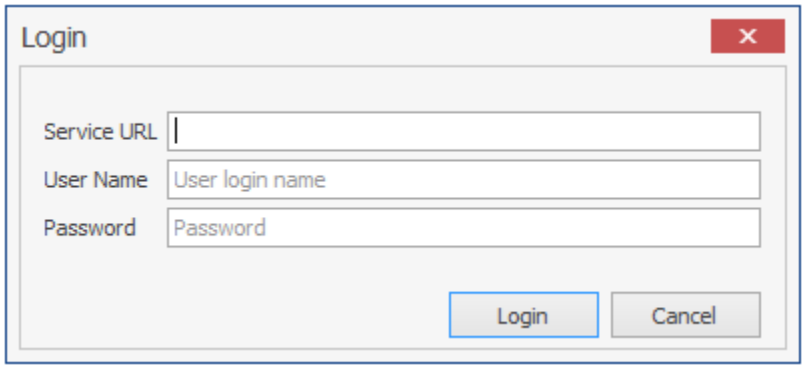


8.2 Using the Report Designer Interface

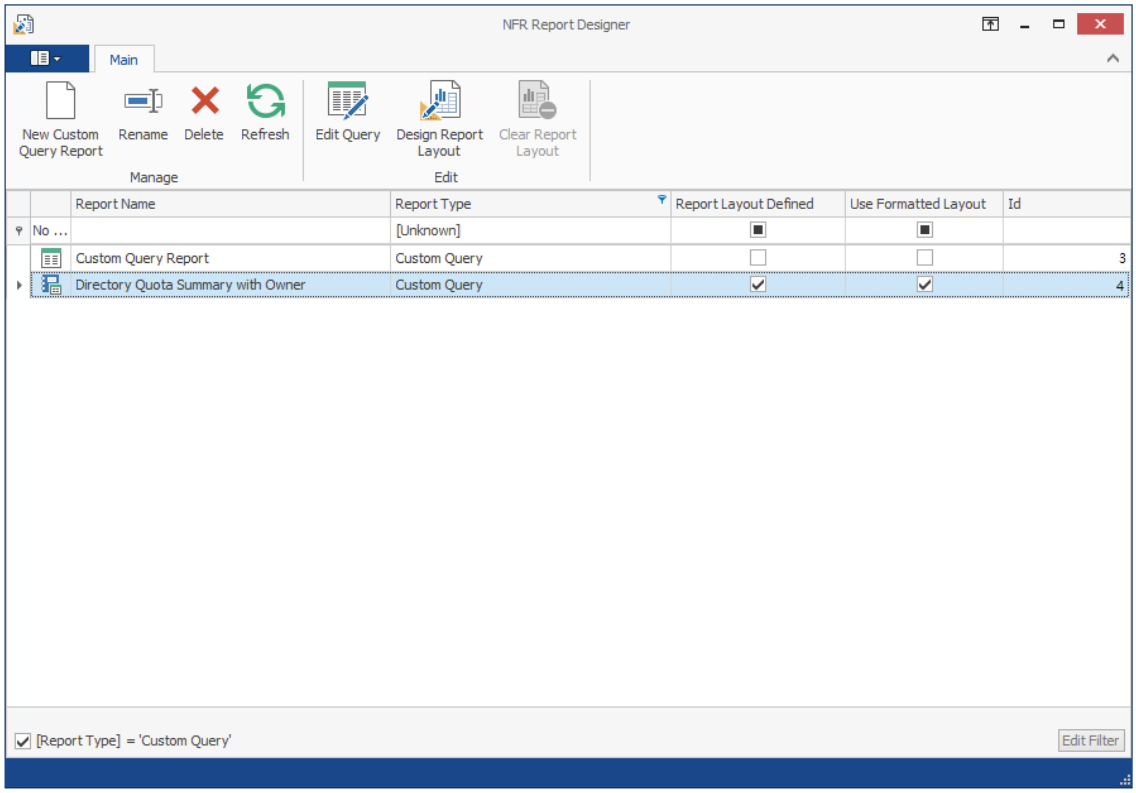
This tool allows you to design reports locally from a Windows workstation, while offering significantly more reporting design capabilities to those of the browser-based administrative interface.

NOTE: You must be a member of the nfradmins group to design reports using Report Designer. The name nfradmins is the default name (which you can change) of the Novell File Reporter administrators group created during the installation of the NFR Engine.

1 Launch the Novell File Reporter Report Designer application.



2 Enter the login credentials and click *Login*.



3 Familiarize yourself with the Report Designer interface.

All Custom Query Reports are listed. Those that have *not* been designed using the Report Designed Layout interface are displayed with the green-bannered text icon, while those designed using the Report Designer have the blue notebook icon.

All of the options on the toolbar are available by selecting a report and right-clicking.

New Custom Query Report: Click to create a new Custom Query Report by launching the Query Editor.

Rename: Click to rename a selected Custom Query Report.

Delete: Click to delete a selected Custom Query Report.

Edit Query: Click to edit the SQL commands pertaining to a selected Custom Query Report through the Report Designer's Query Editor.

Design Report Layout: Launches the Report Designer Layout interface. For more information on the Report Designer Layout interface, see Section 8.4, "Designing a Custom Query Report," on page 106.

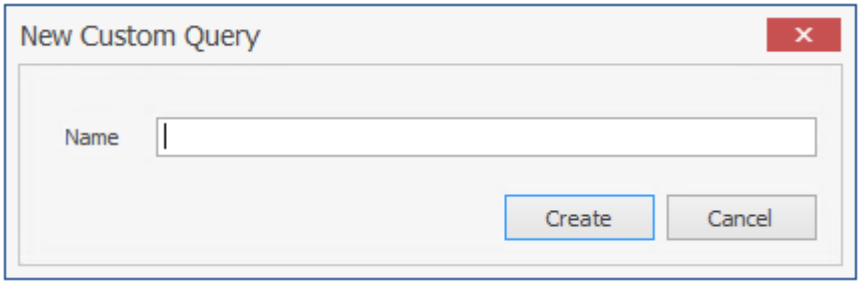
Clear Report Layout: Click to clear custom design settings created using the Report Designer Layout interface. This is a nonreversible procedure.

[Report Type]: By default, this check box is selected so that it displays only Custom Query Reports, which are the only reports that can be designed using the Design Editor. You can deselect the check box to view all of your reports.

8.3 Creating a Custom Query Report

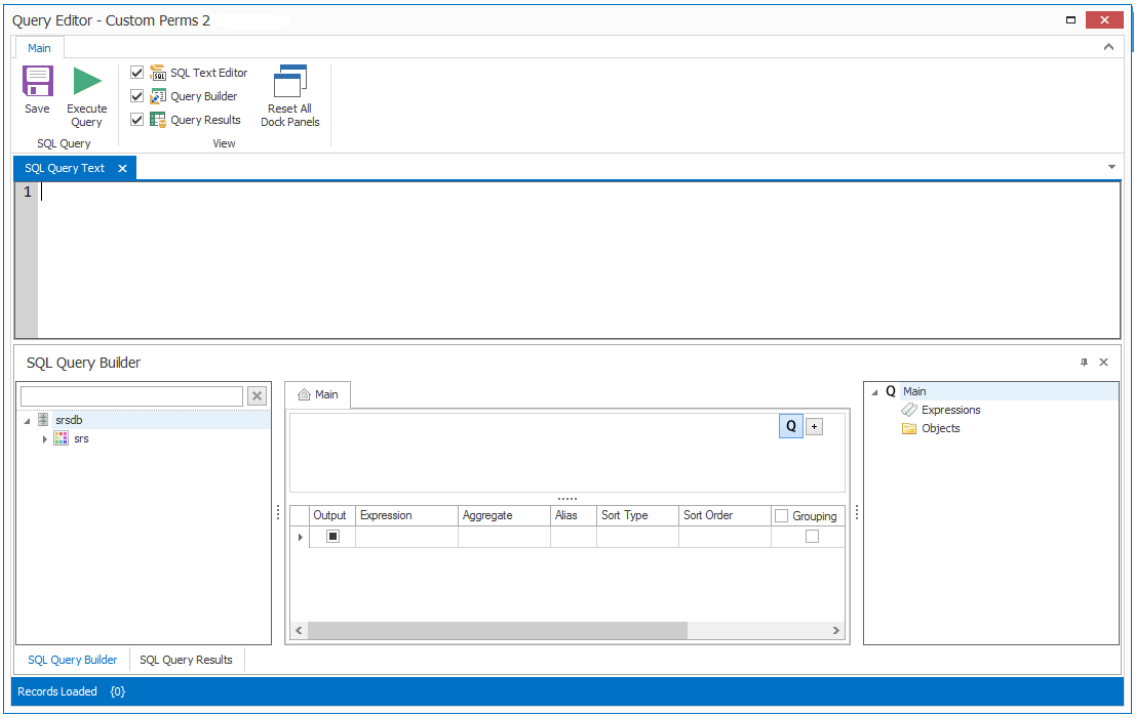
NOTE: For details and examples of the supported database functions, tables, and views that you can utilize in Custom Query reports, refer to the *Novell File Reporter 2.6 Database Schema and Custom Queries Guide*.

1 Click *New Custom Query Report*.



2 Specify a descriptive name, then click *Create*.

The Report Designer Query Editor is launched.

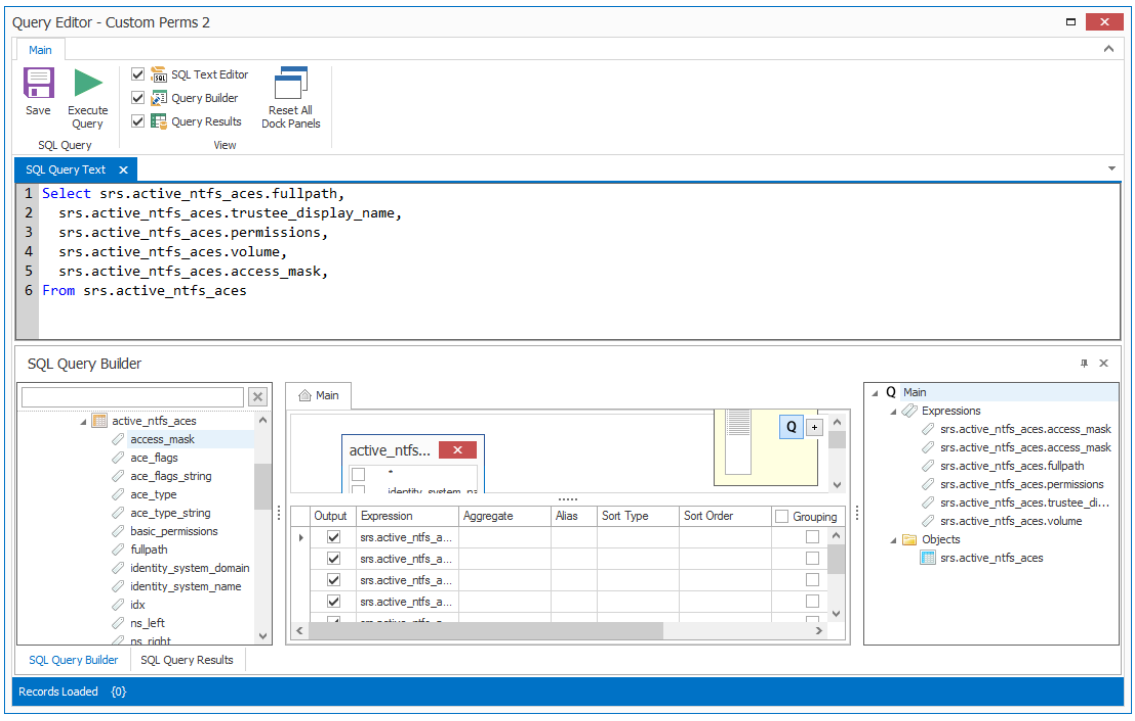


3 In the *SQL Query Builder* region, expand `srs` to see the `Tables` and `Views` folders.

4 Expand either the `Tables` or `Views` folder.

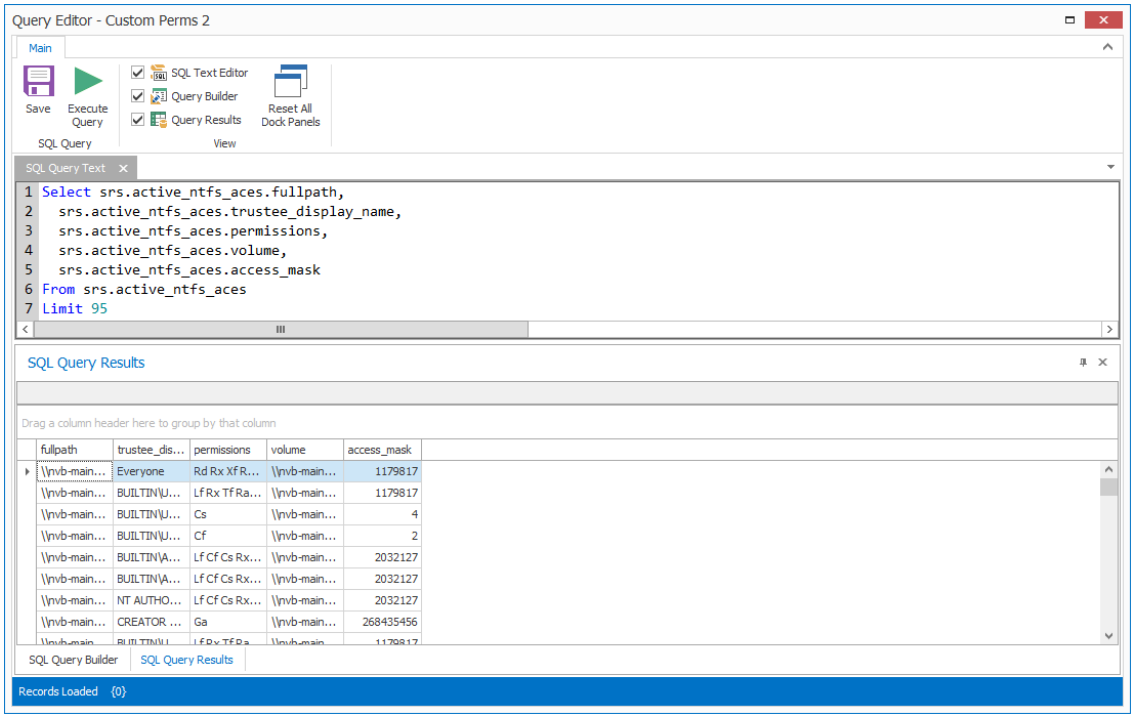
5 Expand a displayed table or view.

6 Select the tables and fields you want included in the query by double-clicking each.



7 Append the query with any additional SQL commands in the text editor.

8 Click Execute Query to get a preview of the Custom Query Report.



9 Click *Save*.

10 Close the Query Editor.

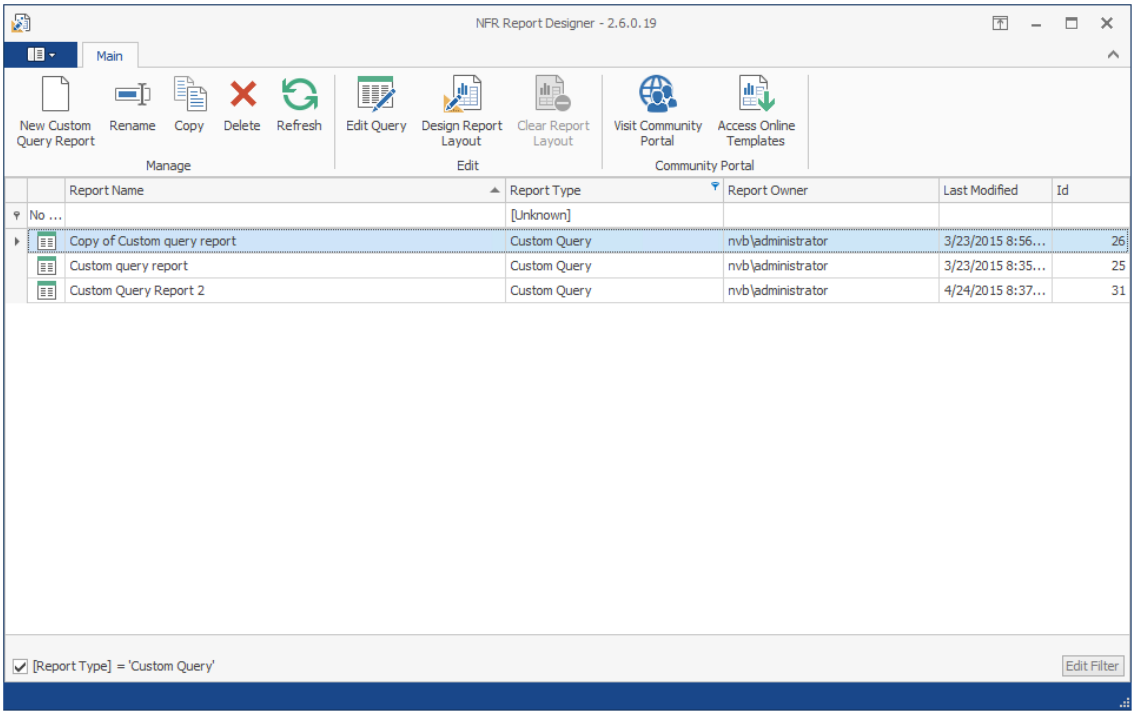
8.4 Designing a Custom Query Report

After you have created a Custom Query Report, either through the Report Designer Query Editor or the Query Editor built into the browser-based administration interface, you can design the layout of the report.

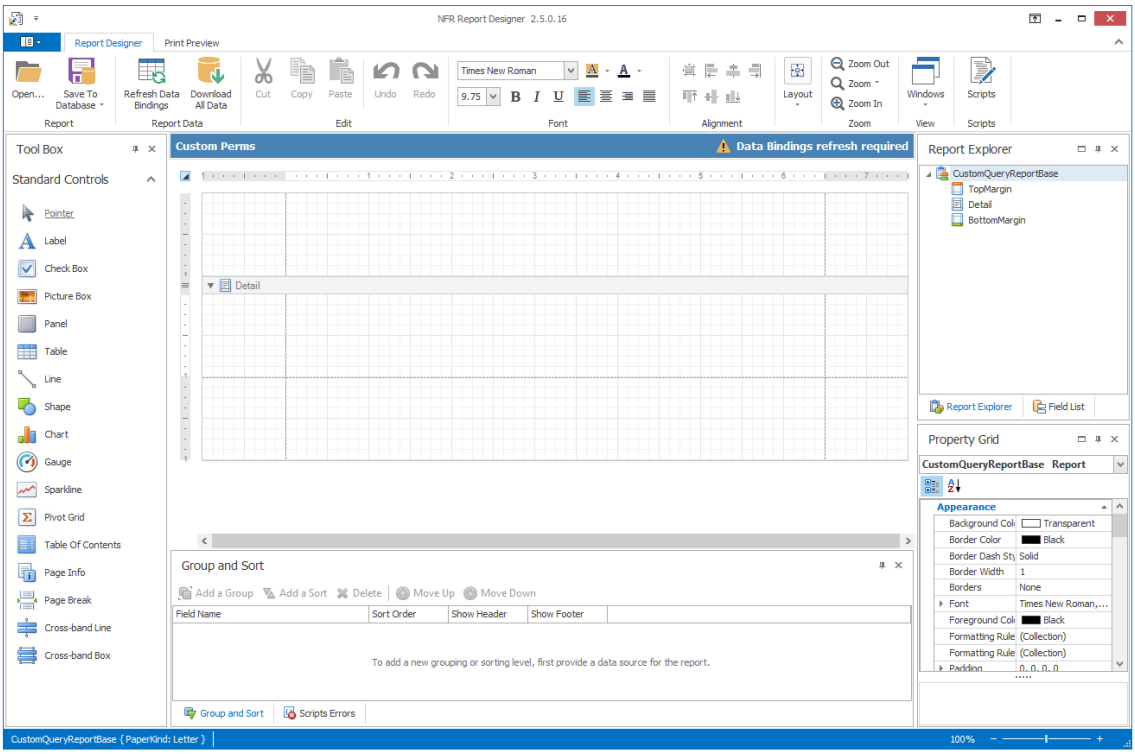
NOTE: This exercise introduces you to some of the very basic design features of the Report Designer. Through familiarizing yourself with the basic features, you will become proficient enough in the interface to try more advanced features.

---

1 From the listed Custom Query Reports, select the one you want to design.



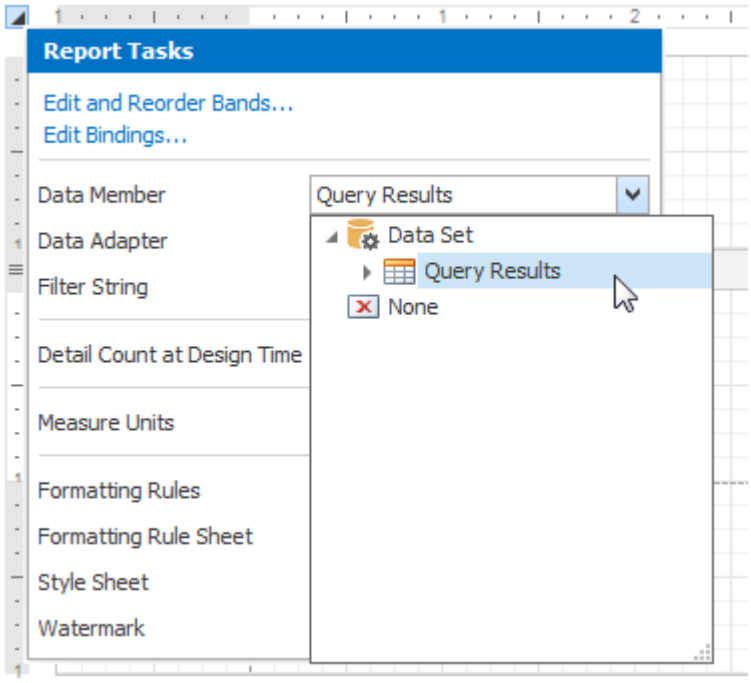
2 Click *Design Report Layout*.



3 Click *Refresh Data Binding*.

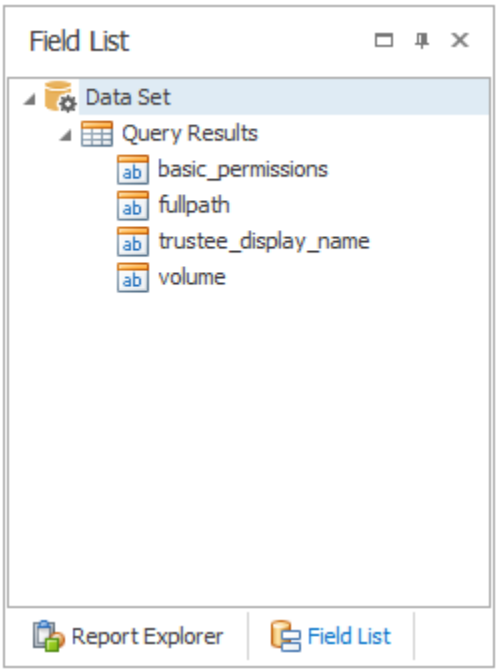
4 In the upper-left corner of the layout grid, from the *Data Member* drop-down menu, select *Query Results*.

This action properly ties the data to the Report Designer.



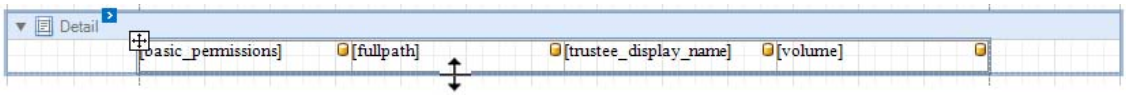
5 At the bottom of the *Report Explorer* region, click *Field List*.

6 Expand the *Query Results* to show all of the result fields of the Custom Query Report.



7 Drag the result fields to the *Detail* region of the layout grid.

8 Resize the frame so the bottom is aligned with the bottom of the four report elements.

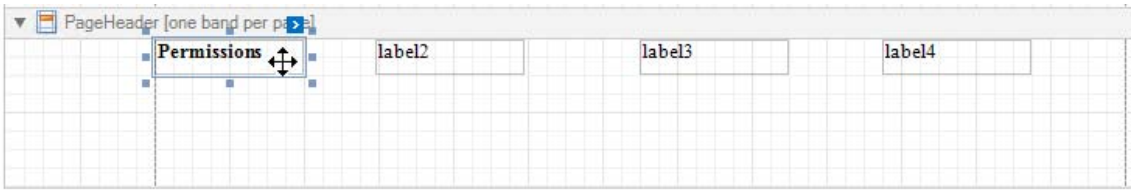


9 Right-click above the *Detail* frame and select *Insert Band* > *Page Header*.

10 From the *Tool Box*, drag a *Label* over to the new *PageHeader* frame and line it up above the first report element.

11 Repeat Step 10 for each label you want to have in the report.

12 Edit the label names.

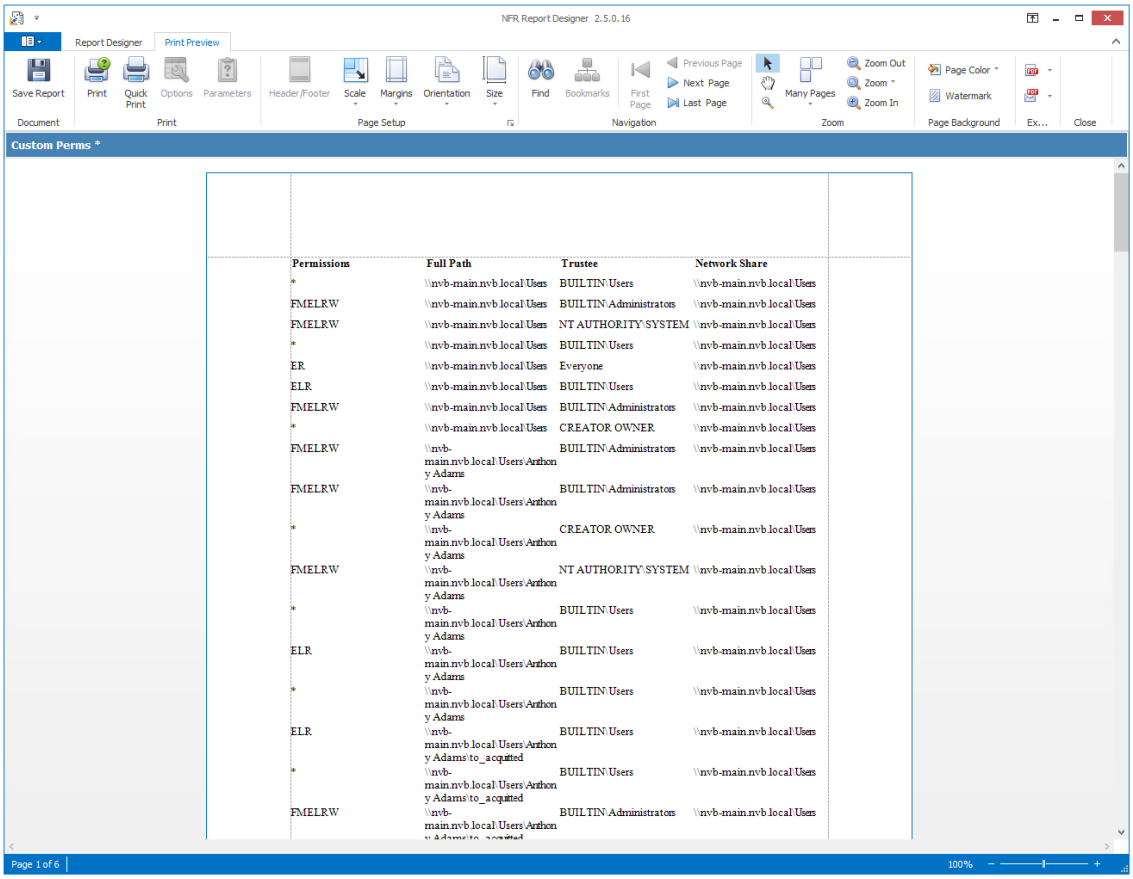


13 Resize the frame so the bottom is aligned with the bottom of the report elements.

14 Click the *Download All Data* button.

15 When the confirmation dialog box appears, click *Yes*.

16 Click *Print Preview* to view how the report looks up to this point.

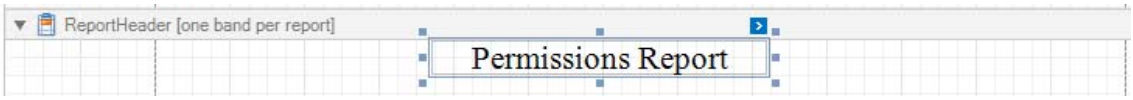


17 Click the *Report Designer* tab.

18 Right-click above the *PageHeader* frame and select *Insert Band* > *Report Header*.

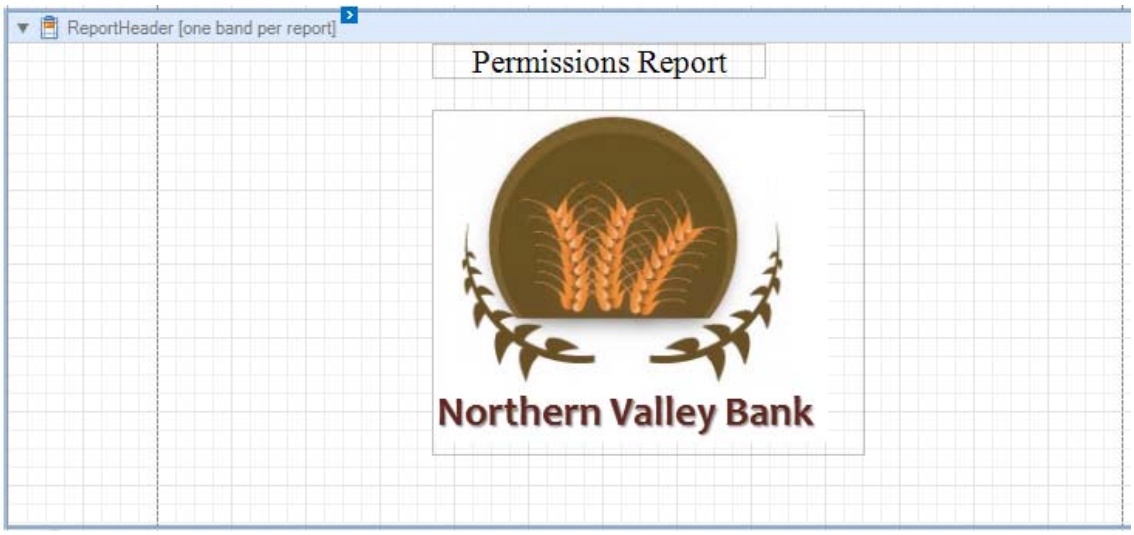
19 From the *Tool Box*, drag a *Label* over to the new *ReportHeader* frame and center it at the top of the frame.

20 Enter a name for the report.



21 From the *Tool Box*, drag a *Picture Box* below the report title.

22 Activate the frame, click the > and from the *Image* field, click the ellipses (…) to select a graphic.



23 From the *Tool Box*, drag a *Label* over to the *ReportHeader* frame and center it below the graphic.

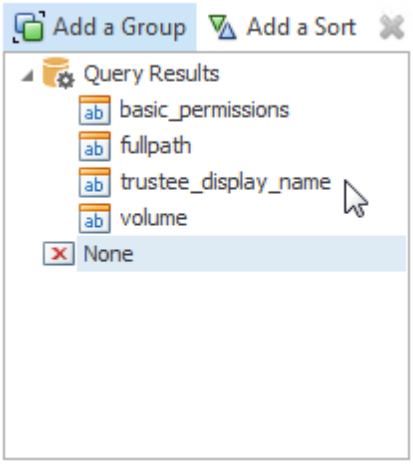
24 In the new label, enter today's date.

25 From the *Tool Box*, drag a Page Break to the *Report Header* frame and below the date label.

26 From the *Tool Box*, drag a *Page Info* to the right of the furthermost label on the right in the *GroupHeader* frame.

You might need to adjust the width of the *Page Info* frame.

27 From the *Group and Sort* region, select *Add a Group* and select one of the result fields you would like the report to sort.



28 From the *Tool Box*, drag a *Label* over to the new *GroupHeader1* frame.

29 Give the label a descriptive name.

30 From the *Field List* region, expand the *Query Results*.

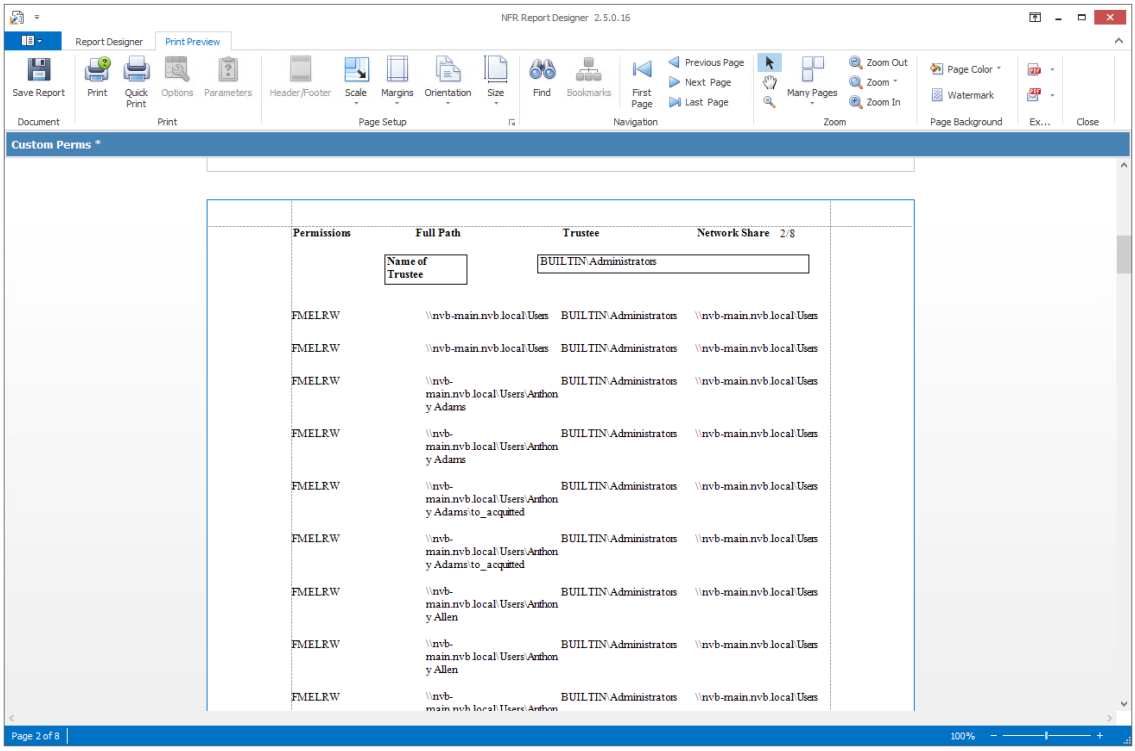
31 Drag the applicable report element into the GroupHeader1 frame, next to the label you just named.

32 If necessary, expand the length of the report element.

33 Select both items in the *GroupHeader1* frame; from the *Property Grid* region, for the *Borders* setting, select *All*.

34 Adjust the depth of the *GroupHeader1* frame so that it has the desired space you want from the columns in the report.

35 Click *Preview Report*.



36 Click *Save to Database* to save the report.

37 When notified that the report definition was successfully saved to the database, click *OK*.

8.5 Saving the Layout as a Template

When working with the Report Designer, you might create a layout design that you want to utilize as a template for future Custom Query Reports. You can do so using Save As File.

1 In Report Designer, open the Custom Query Report whose design you want to save as a template.

2 Select *Save* > *Save As File*.

3 Name and save the layout.

The layout is saved as a `.repx` (Report Layout XML) file.

8.6 Using a Saved Template for Custom Query Reports

You can use saved `.repx` files as design templates for Custom Query Reports.

TIP: You can also use the sample report layouts and SQL commands that are available from the File Query Cookbook, a new collaborative community portal for accessing and sharing Custom Query reports. Both the SQL commands and report layouts can be customized as needed.You can access the File Query Cookbook directly through the Report Designer interface, or at http://www.filequerycookbook.com (http://www.filequerycookbook.com).

1. In Report Designer, open the Custom Query Report you want to design using a saved template.
2. Click *Open*, then select the `.repx` file you want to use for designing your report.

   The report is updated with the design from the `.repx` file.

9 Data Analytic Tools

With the release of Novell File Reporter 2.5, Novell provided a “Technology Preview” of analytic tools that are still in development. Although some features and capabilities will be introduced at a later time, many of these features and capabilities are available today.

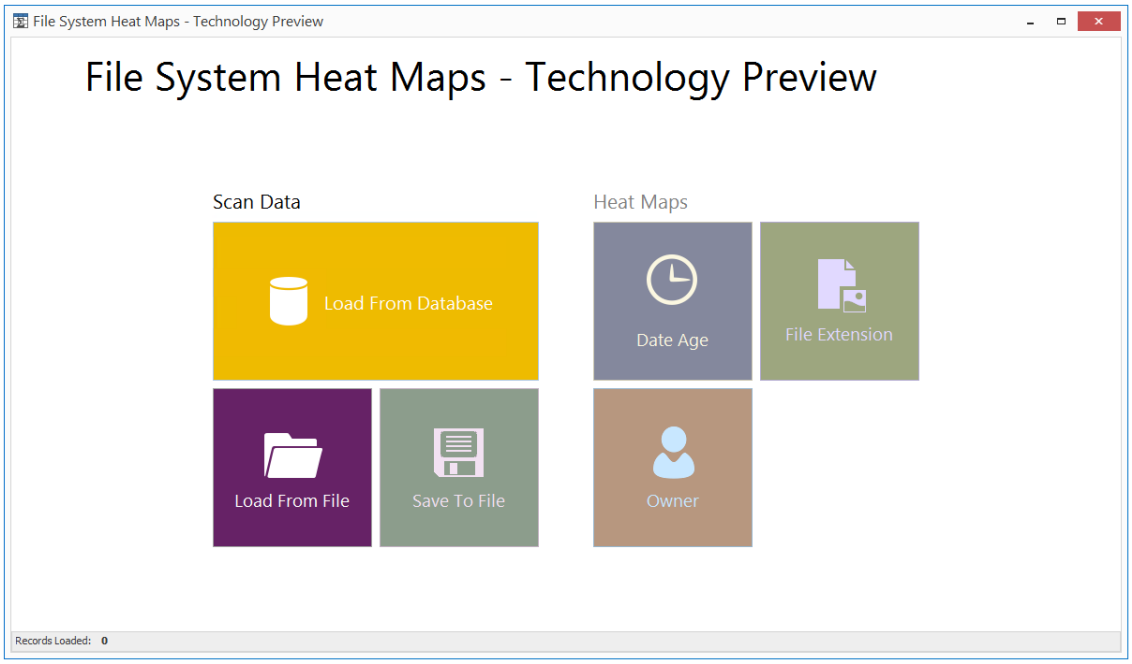
The data analytic tools include the following Windows workstation applications:

- Heat Map (32-bit application)
- Pivot Table (64-bit application)

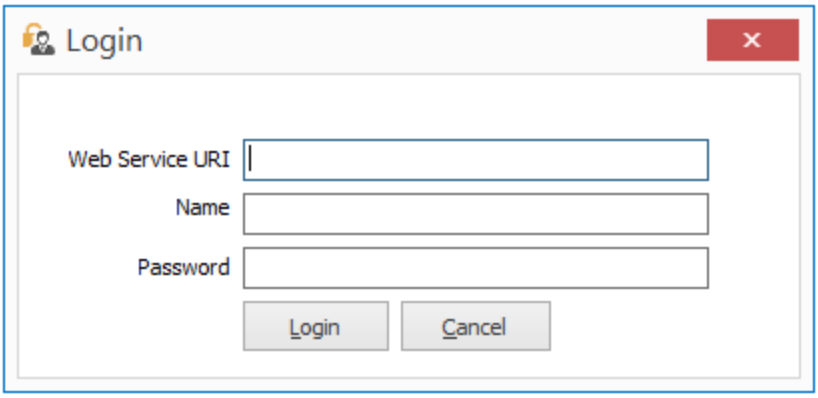
9.1 Using the Heat Map

NOTE: As a 32-bit application, the Heat Map might not be able to process large scans due to its current memory limitations.

1 Launch the `FSHeatMaps.exe` application.



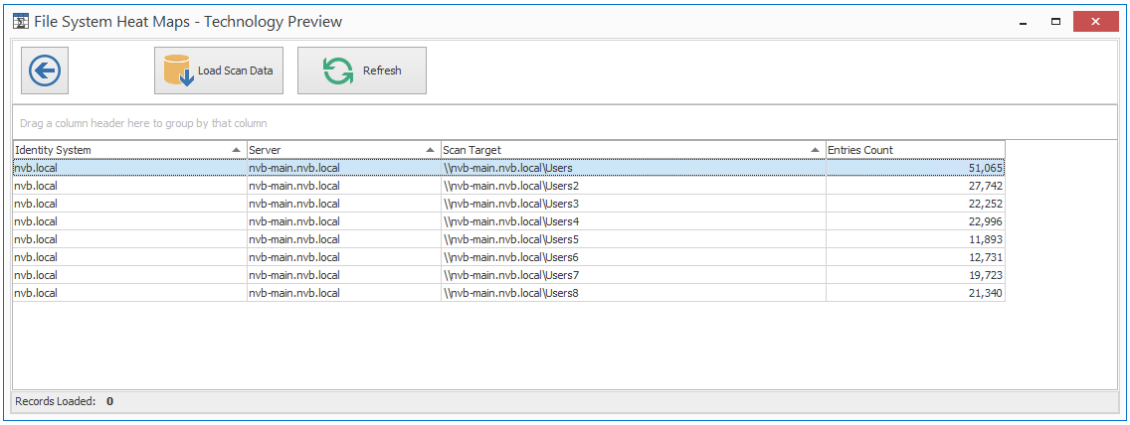
2 Click *Load from Database* or *Load from File* to load Fie System scans.



3 Complete the fields in the Login dialog box, then click *Login*.

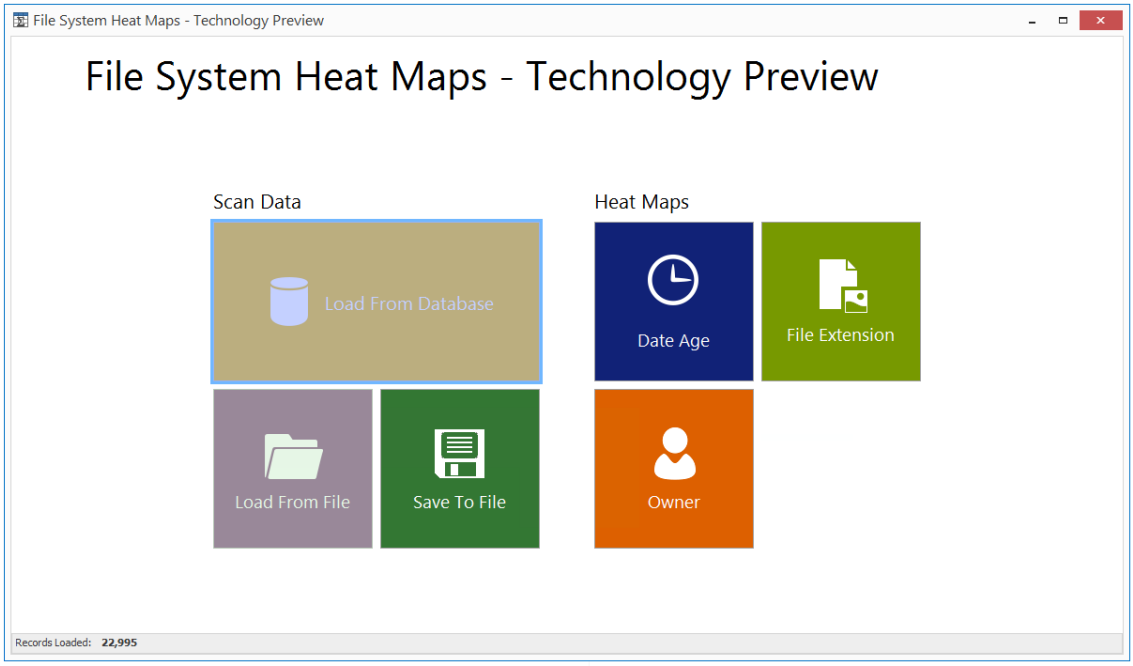
The *Web Service URI* field should specify the URL used to access the Novell File Reporter web application.

All of the File System scans appear in a list.

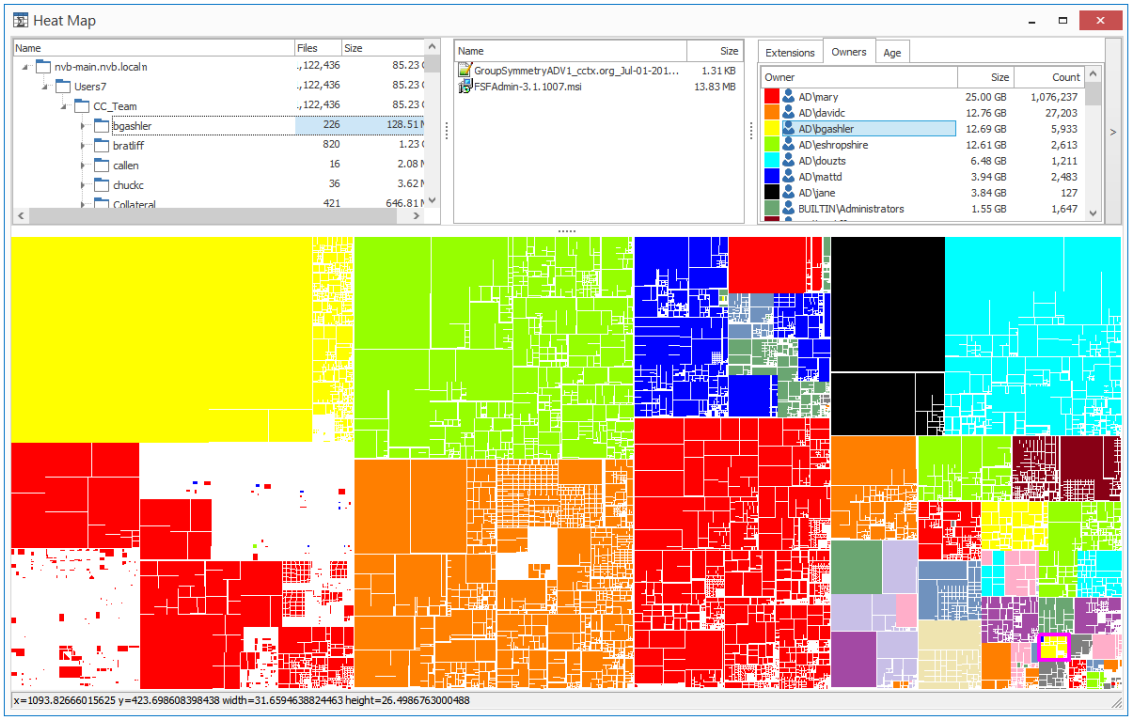


4 Double-click one of the listed scans.

The *Date Age, File Extension*, and *Owner* options are now available, enabling you to view the heat map data according to the selected option.



5 Click one of the options.



You can navigate the file system in the top left frame, view the contents in the top middle frame, and change the display parameters in the top right.

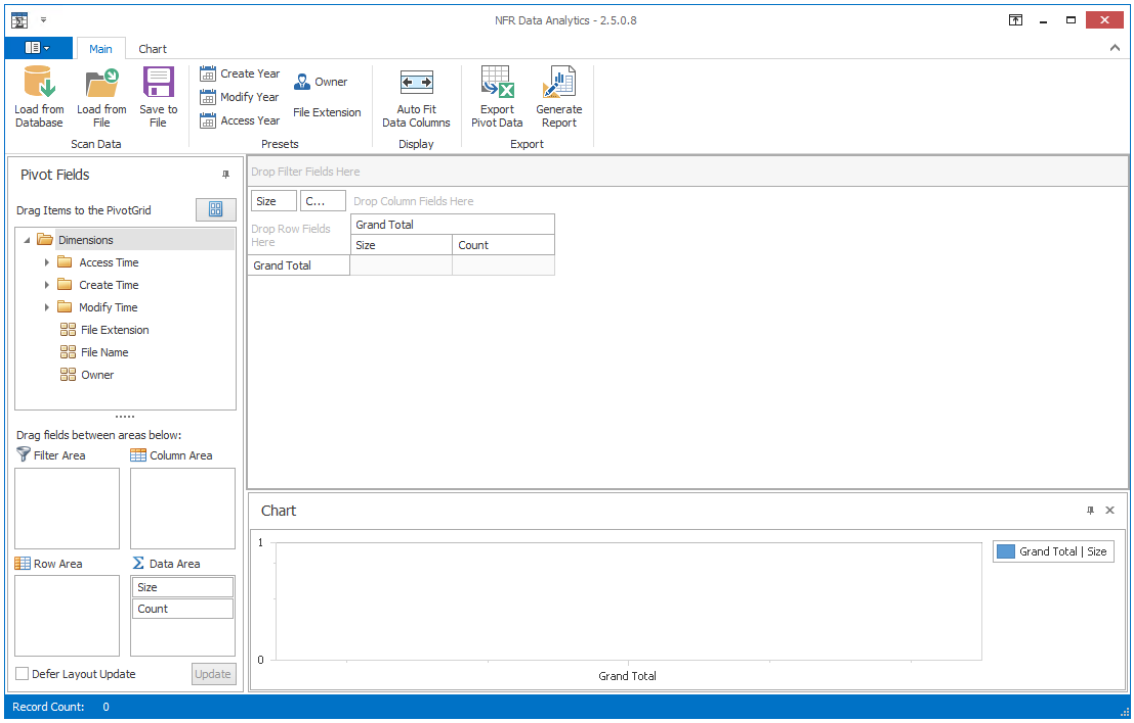
Placing the cursor over a location on the heat map displays the full file path of an individual file in the bottom portion of the heat map.

NOTE: A current limitation of the heat map is that you must restart the application to load a separate set of scan data.

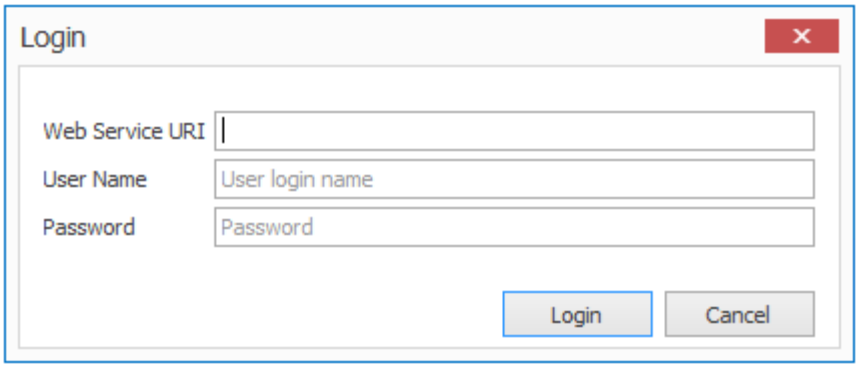
9.2 Using the Pivot Table

This exercise introduces you to some of the very basic features of the pivot table. Through familiarizing yourself with the basic features, you will become proficient enough in the interface to utilize even more advanced features.

1 Launch the `DataAnalytics.exe` application.



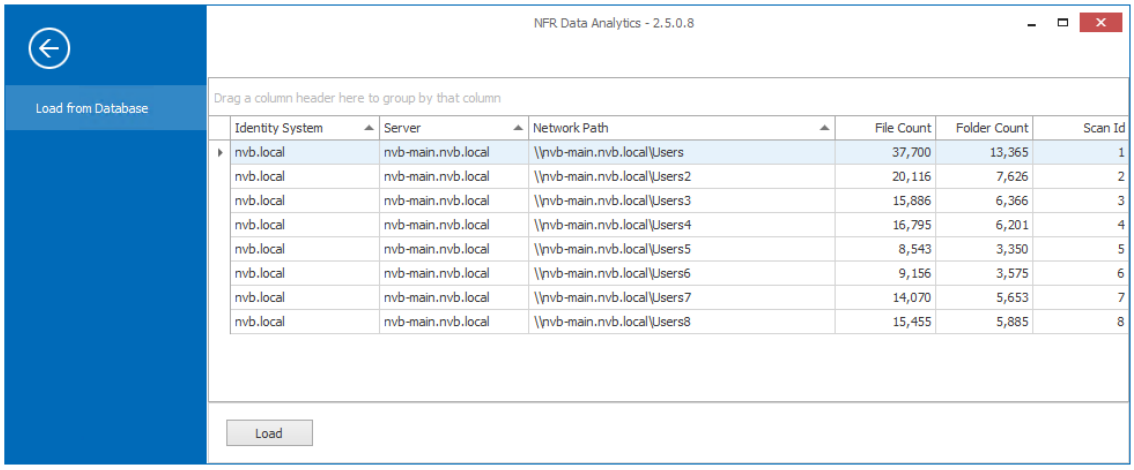
2 Click either *Load from Database* or *Load from File*.



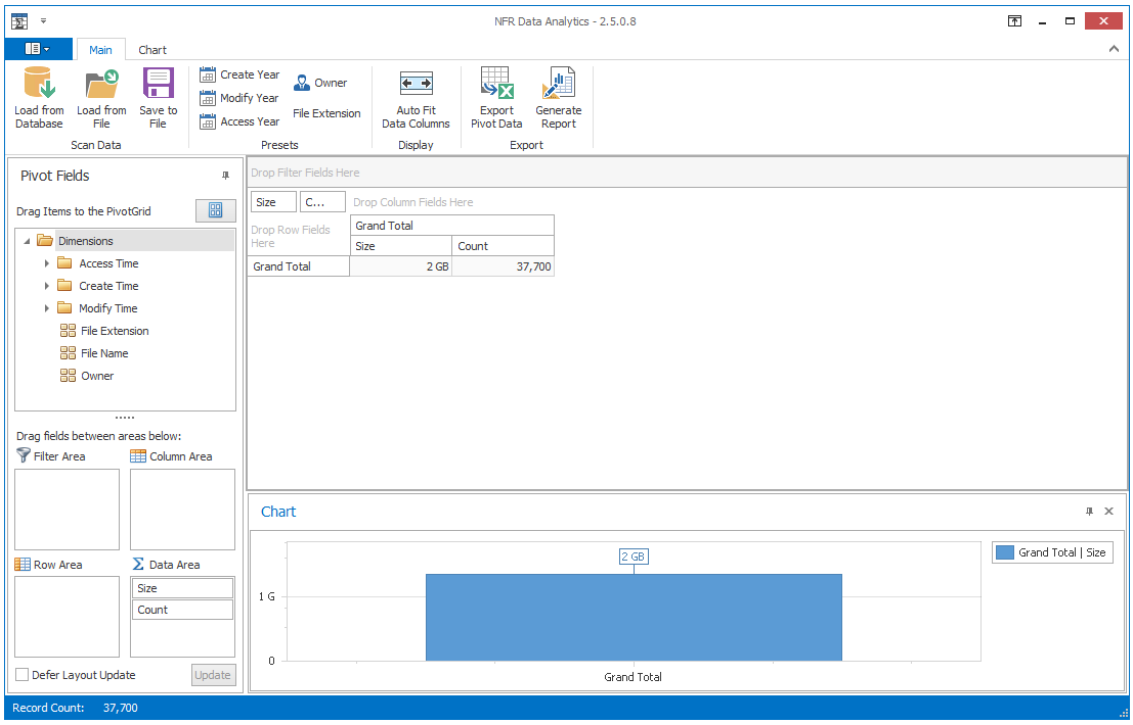
3 Complete the fields in the Login dialog box, then click *Login*.

The *Web Service URI* field should specify the URL used to access the Novell File Reporter web application.

All of the File System scans appear in a list.

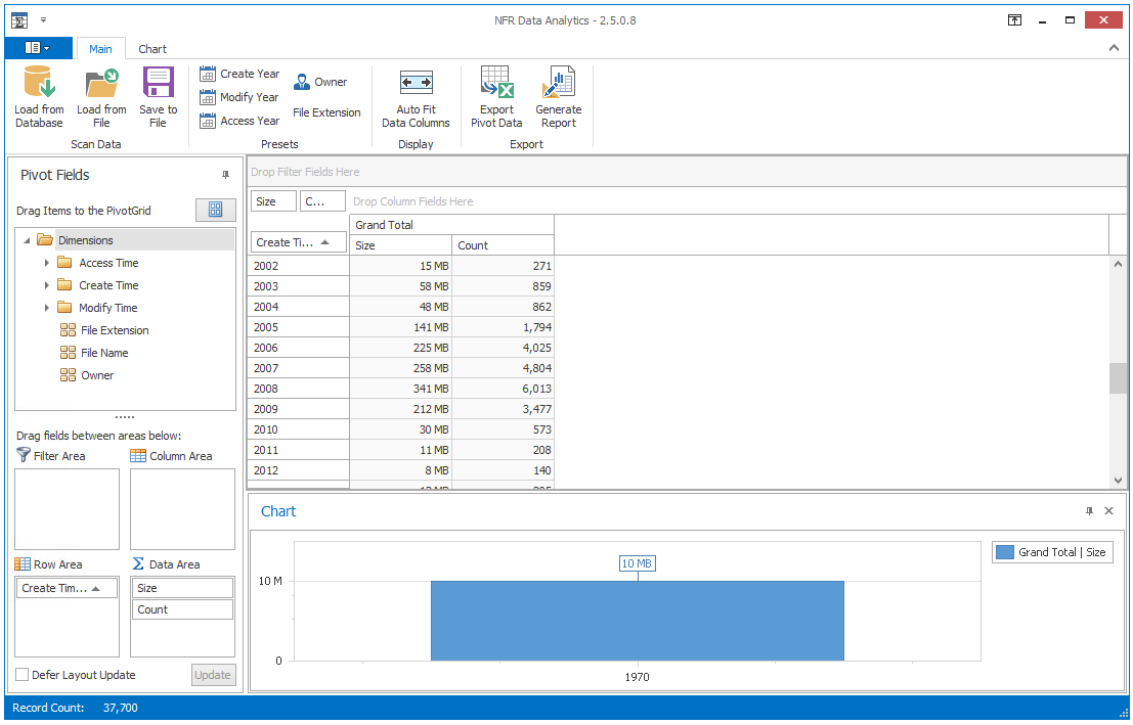


4 Double-click one of the listed scans.

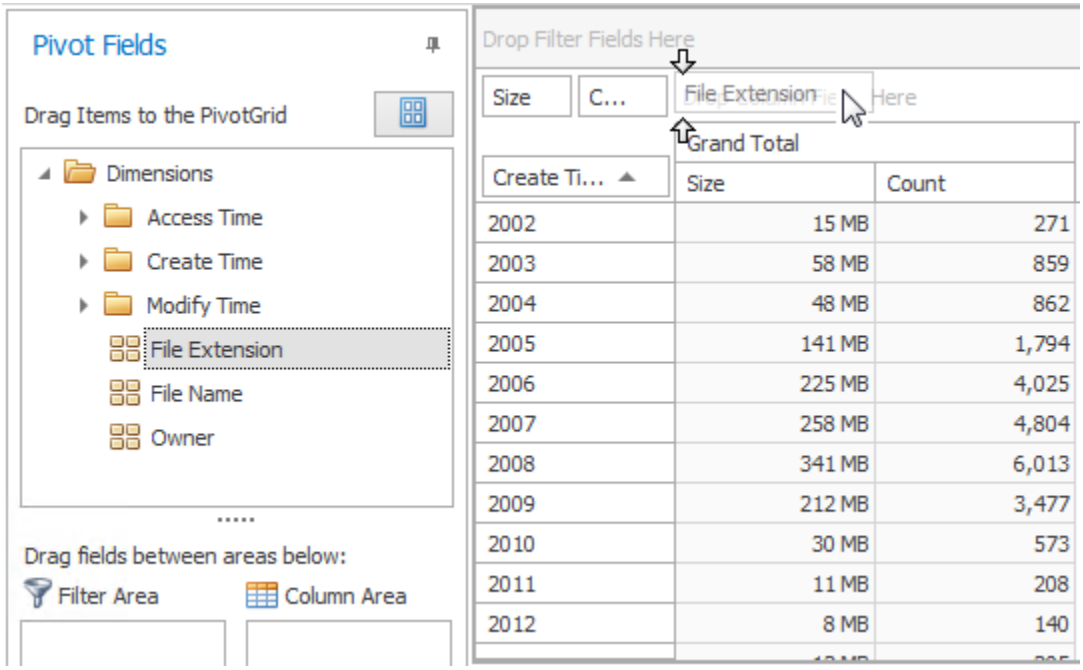


5 For this exercise, click *Create Year* from the toolbar.

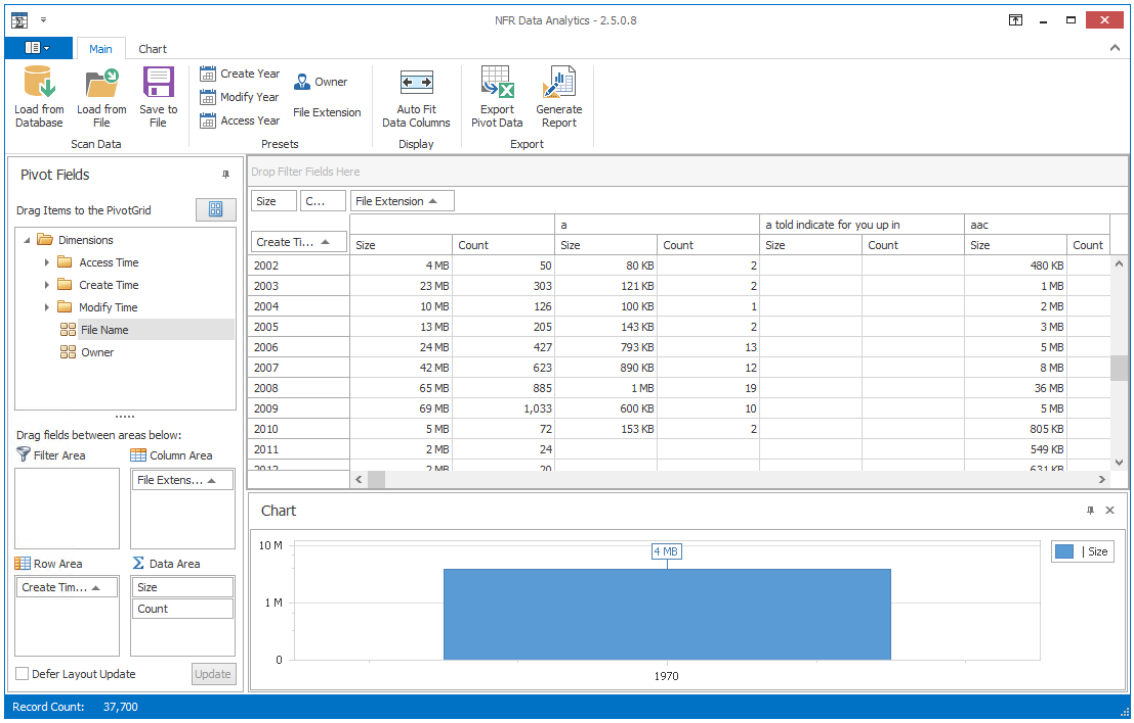
Observe the creation of the pivot table.



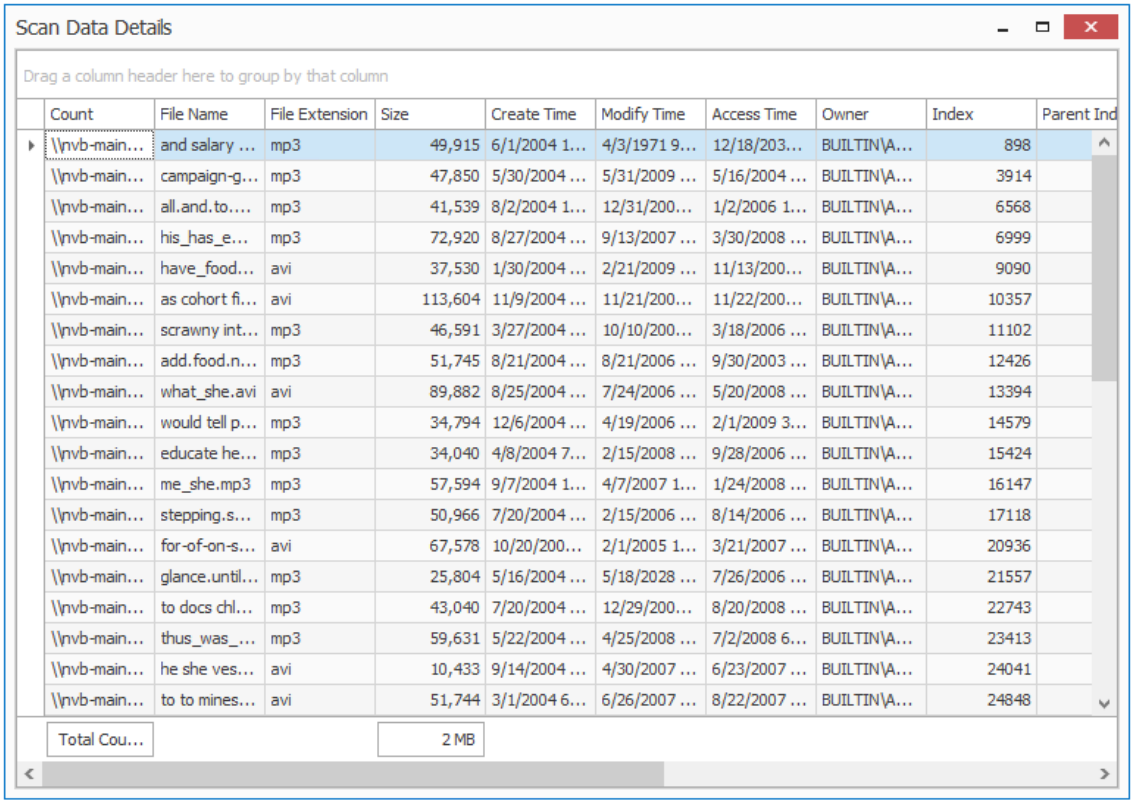
6 From the *Pivot Fields* region, drag *File Extension* to the right of the *Count* column.



Observe the updated appearance of the pivot table.



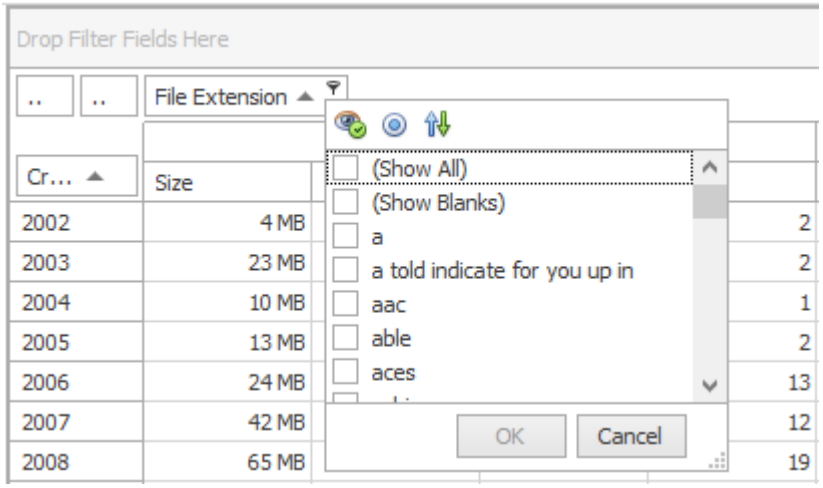
7 In the pivot table, double-click one of the cells.



8 Expand the *Count* column to see the paths of all listed files.

9 Close the Scan Data Details report.

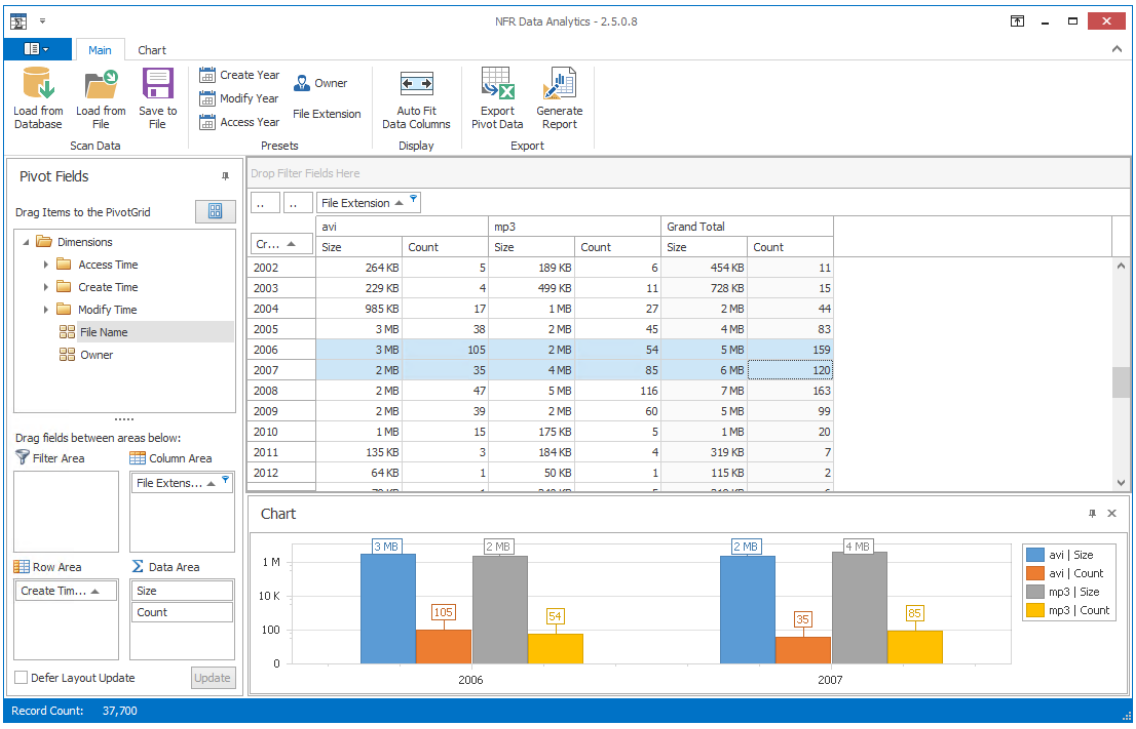
10 In the pivot table, from the *File Extension* tab that you added, click the associated filter icon; then from the drop-down menu, deselect *Show All*.



11 From the same drop-down menu, select two or three common media file types such as mp3, mov, and so forth; then click *OK*.

Observe the updated pivot table.

12 In the pivot table, highlight two rows and observe the change in the *Chart* region.



13 Click the *Chart* tab and the middle arrow to expand the chart options.

14 Click the *Pie* option.

15 Click the *Main* tab.

16 Click *Generate Report*, then view the report.

17 Close the report.

18 Click *Save to File* to save the data locally.

Save to File saves only the data. In other words, the data from the scan. After it is saved locally, you can load the data into a pivot table later.

A Filtering

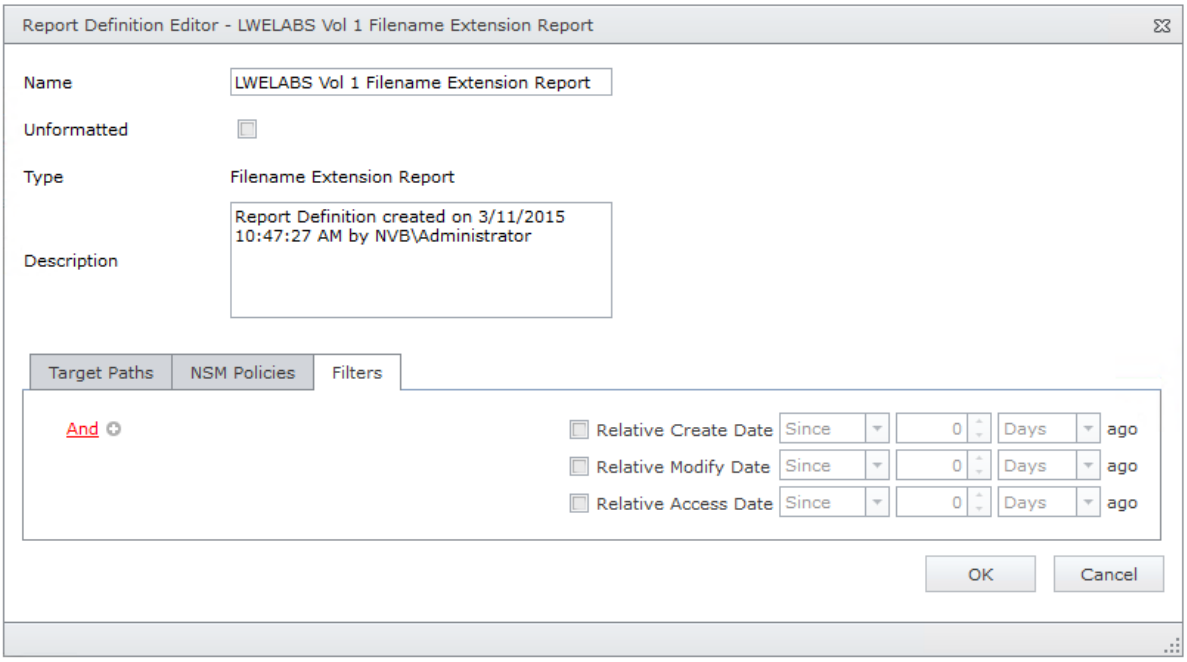
Novell File Reporter enables you to utilize advanced filtering capabilities so that your reports include only the data you want. Novell File Reporter provides this advanced filtering capability for all File Data Reports, which include:

- Filename Extension Reports
- Filename Extension Detail Reports
- Owner Reports
- Owner Detail Reports
- Duplicate File Reports
- Duplicate File Detail Reports
- Date-Age Reports
- Date-Age Detail Reports

A.1 Filters Tab

All filtering takes place in the *Filters* tab of the Report Definition Editor.

Figure A-1 *Filters Tab*



You set filter parameters using the Boolean operators available through the *And* drop-down menu, and adding the search parameters with the+ button. Alternatively, you set date filters using the *Relative Date* filter parameters on the right-hand portion of the page.

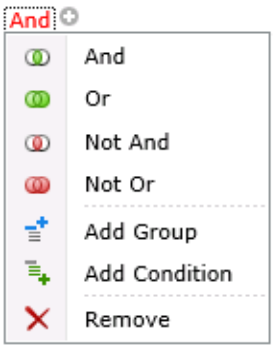
You can filter according to size, dates, or both.

A.1.1 And Drop-Down Menu and + Button

The *And* drop-down menu is used to:

- Select Boolean operators for creating a search filter
- Create additional groups or conditions
- Delete search filters, groups, or conditions

Figure A-2 *And Drop-Down Menu*



The + button next to the *And* drop-down menu is the used to create parameters for a search condition.

Figure A-3 *Parameters for Filter*

A.1.2 Relative Date Filtering Parameters

Select the *Relative Create Date*, *Relative Modify Date*, and *Relative Access Date* check boxes to enable the corresponding drop-down menus and fields.

Figure A-4 *Relative Date Filtering Parameters*

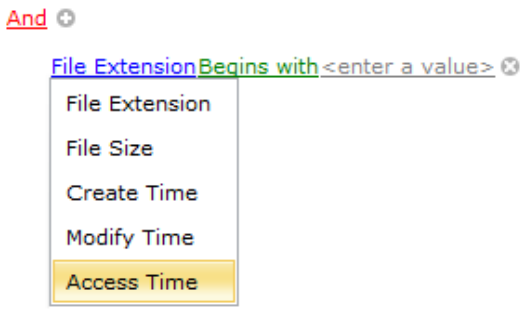
A.2 Single Entry Filter Conditions

- Section A.2.1, “Using the And Drop-Down Menus and + Buttons,” on page 127
- Section A.2.2, “Using the Relative Date Filtering Settings,” on page 128

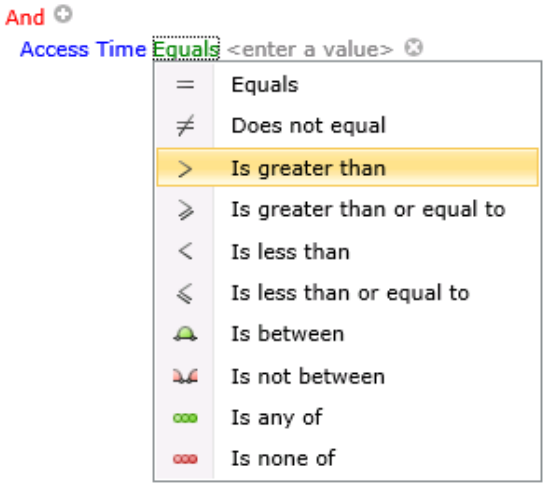
You can use either the *And* drop-menu and + button, or the *Relative Date* filtering settings to create single entry filter conditions.

A.2.1 Using the *And* Drop-Down Menus and + Buttons

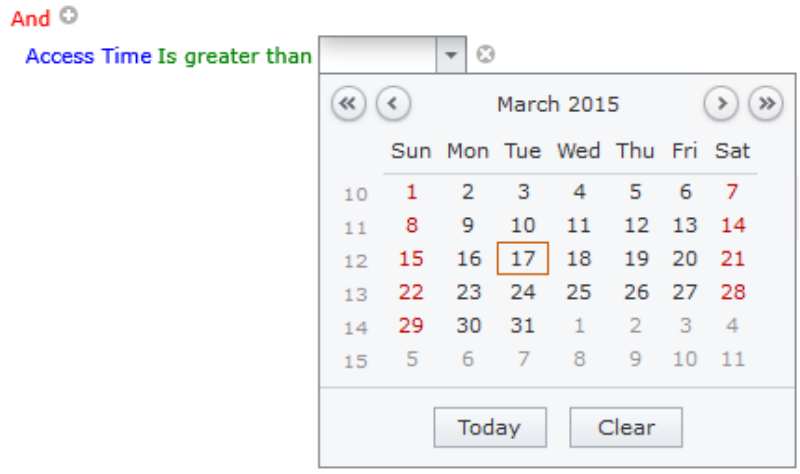
1. From the *And* drop-down menu, select a Boolean operator.
2. Click the + button to add an entry.
3. From the *File Extension* drop-down menu, select a Boolean operator.



4. From the *Equals* drop-down menu, select a Boolean operator.



5 In the *<enter a value>* field, enter a value.



File size values must be entered in bytes. For example, if your filtering parameters were for all files larger than 500 MB, you would enter 524288000 (500 x 1024 x1024). A more practical entry might be 500000000. Do not attempt to enter commas; they are placed automatically.

6 Click *OK* to save the settings in the Report Definition Editor.

Using the settings in this procedure as an example, when you generate a report, the data would include only files that have been accessed after March 17, 2015.

A.2.2 Using the *Relative Date* Filtering Settings

1 From the right-hand side of the Report Definition Editor, select a check box.

This enables the corresponding fields and drop-down menus.

2 From the first drop-down menu, select either *Since* or *Before*.

3 From the numeric field to the right, enter a numeric setting.

4 From the drop-down menu to the right, select from the options.

5 Click *OK* to save the settings in the Report Definition Editor.

Using the setting in this procedure as an example, when you generate a report, the data would include only files that have been accessed in the last six months.

A.3 Multi-Condition Filtering

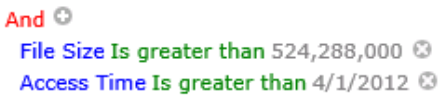
You can set multi-conditioned filters by:

- Entering parameters for more than one entry using the *And* drop-down menu
- Specifying multiple *Relative Date* filtering settings
- Combining parameters specified through the *And* drop-down menu and the *Relative Date* filtering settings

---

IMPORTANT: Be aware that when you set multiple entries in a condition for filtering, that all entries must be met in order for Novell File Reporter to report on the file.

For example, in the example below, the files would appear in the report only if they were greater than 500 MB and had been accessed after April 1, 2012.



B Security Settings

B.1 Rights and Privileges on Scanned Storage

Novell File Reporter must have the proper rights set on each network volume or share that it scans. In addition, certain privileges must be granted to Novell File Reporter on the machine hosting the NFR Engine and on each server where storage is managed.

B.1.1 Granting Rights

Every Windows network share to be scanned by Novell File Reporter must have proper rights assigned to the Novell File Reporter proxy rights group.

1. As an Active Directory domain administrator, authenticate to the server where the storage is located.
2. Grant Read Only sharing privileges to the proxy rights group for each share that Novell File Reporter will scan.

B.2 Windows Firewall Requirements

The Windows Firewall has different default configurations on Windows Server 2003, Windows Server 2008, Windows Server 2008 R2, and Windows Server 2012. The following Windows Firewall exceptions are configured during component installations and upgrades:

- The NFR Engine must remain permitted to make outbound connections.
- The NFR Engine must remain able to listen on port 3035.

  This is the default port choice that is presented during the installation and configuration.
- The NFR Agent must remain permitted to make outbound connections.
- The NFR Agent must remain able to listen on port 3037.

  This is the default port choice that is presented during the installation and configuration.
- On each server running Windows Server 2008 or later and hosting storage that you wish to collect quota via proxy, you must enable the Remote File Server Resource Manager Management - FSRM Service (RPC-In) firewall rule.

On servers running Windows Server 2008, the firewall settings are applicable to each of three different categories of network interfaces that are identified based upon their IP address range (public IP addresses versus private IP addresses) and whether or not the computer is a member of a domain.

Depending upon the specific environment where Novell File Reporter is installed, the firewall might need to have these exceptions enabled in one or more of the following categories:

- Domain
- Private
- Public

B.3 Local Security Authority Rights and Privileges

Local Security Authority (LSA) rights and privileges are assigned to accounts or groups, and they determine how those accounts or group members may access the system. The rights and privileges are modified through `secpol.msc` or Local Security Policy from:

Start > Administrative Tools > Local Security Policy

1. In Local Security Policy, go to the following:

   Security Settings > Local Policies > User Rights Assignments

2. In the table of *Privileges* and the objects to which they apply located on the right, verify that the Novell File Reporter proxy rights group has the following privileges:
   - Access this computer from the network
   - Act as part of the operating system
   - Back up files and directories
   - Bypass traverse checking
   - Create a token object
   - Create symbolic links
   - Impersonate a client after authentication
   - Log on as a batch job
   - Manage auditing and security log
   - Restore files and directories
   - Take ownership of files or other objects

IMPORTANT: The NFR Engine and NFR Agent components attempt to repair these privileges on startup on the servers on which they're installed. Absence of some of these privileges causes the NFR Engine and NFR Agent components to not function properly. Removal of these rights and privileges via Group Policy Object (GPO) results in the NFR Engine and NFR Agent not functioning properly.

If GPO conflicts are detected, set up an additional GPO with just the privileges listed above and assign it to the proxy rights group for the appropriate servers.

IMPORTANT: Some people assume that assigning these rights and privileges to the proxy rights group is sufficient so that they can thus remove the proxy rights group as a member of built-in Administrators. This is incorrect. In order for the NFR Agent to collect quota information on Windows, the Novell File Reporter proxy rights group must be a member of built-in Administrators.

B.4 Proxy Rights Group

By default, whenever any of the components of Novell File Reporter are installed on a server in a domain, the proxy rights universal security group is granted membership in that server's built-in Administrators security group. This grants Novell File Reporter certain permissions needed in addition to the LSA privileges required for successful scanning of file system metadata.

On other servers in the domain that are hosting storage to be scanned by Novell File Reporter through a proxy agent, you must also grant the proxy rights group membership in the built-in Administrators group. This is necessary because there are many actions performed that require membership in this group regardless of the LSA privileges that the user has been granted—in particular, reading directory quotas.

Additionally, the other servers in the domain that are not hosting components, but are hosting storage to be scanned, must have the necessary rights and privileges, along with some file share and NTFS permissions. The easiest way of granting these rights and privileges is through Group Policy objects in Active Directory.

As explained previously, at a minimum, you must grant Read Only sharing and security privileges to the proxy rights group for each share that Novell File Reporter will scan.

B.5 Windows Clustering through Proxy Agents

Novell File Reporter supports clustering of Windows Server 2003 and later through proxy agents. Configuring a cluster to be scanned through a proxy agent is similar to configuring an individual server to be scanned by a proxy agent. In particular, the Novell File Reporter proxy rights group must be granted membership in the built-in Administrators group and it must also be granted all of the LSA rights and privileges that are granted at each cluster node. When this is done, the folder share permissions and NTFS permissions that are required must be granted to the proxy rights group for all shares and NTFS volumes that will be scanned by Novell File Reporter.

C Log File Locations

When troubleshooting Novell File Reporter, you might need to refer to the NFR Engine or NFR Agent log files. Procedures for finding each are provided below.

C.1 NFR Engine Log File

1. At the machine hosting the NFR Engine, launch Windows Explorer.
2. In the Address Bar, type `%programdata%` and press Enter.
3. Use the following path to locate the log file:

   `Novell\File Reporter\Engine\Log`

C.2 Windows Agent Log File

1. At the machine hosting the Windows NFR Agent, launch Windows Explorer.
2. In the Address Bar, type `%programdata%` and press Enter.
3. Use the following path to locate the log file:

   `Novell\File Reporter\Agent\Log`

C.3 Linux Agent Log File

1. At the server hosting the Linux NFR Agent, launch a terminal session.
2. Use the following path to locate the log file:

   `/var/opt/novell/filereporter/agent/log`

D NFR Agent Scan Capabilities

D.1 Server Platform and NAS Device Support

Table D-1 *Server Support Matrix*

Server Platform	File Reporter 2.0.0	File Reporter 2.0.1	File Reporter 2.0.2, 2.5, and 2.6
NetWare 6.5 SP8	✔	✔	✔
OES Linux 2 SP3, SP4	✔	✔	✔
OES Linux 11 RTM, SP1	✔	✔	✔
Windows Server 2003	✔	✔	✔
Windows Server 2008	✔	✔	✔
Windows Server 2008 R2	✔	✔	✔
Windows Server 2012	✔	✔	✔
Windows Server 2012 R2	✘	✘	✔

Table D-2 *NAS Device Support for Windows Environments*

NAS Device	File Reporter 2.0.0	File Reporter 2.0.1	File Reporter 2.0.2, 2.5, and 2.6
NetApp filer (7 mode or Cluster mode)	✔	✔	✔
EMC Celerra	✔	✔	✔
Isilon	✘	✘	✔

D.2 File System Metadata

The following table lists file system scanning capabilities of Novell File Reporter.

Table D-3 *File System Metadata Support*

File System Metadata	Windows ReFS	Novell NSS	Novell TFS	NCP Volumes
Full Path	✔	✔	✔	✔
File Name	✔	✔	✔	✔
File Name Extension	✔	✔	✔	✔
File Size	✔	✔	✔	✔
File Sparse Size	✘	✘	✘	✘
File Compressed Size	✘	✘[1]	✘[1]	✘
File Size on Disk[2]	✔	✔	✔	✔
Create Time	✔	✔	✔	✔
Modify Time[3]	✔	✔	✔	✔
Access Time[3]	✔	✔	✔	✔
Directory Quota	✘	✔	✔	✘
Owner	✔	✔	✔	✔

1. Even though NSS volumes support compression, they only report compression metrics at the volume level, not on a per-file basis.
2. File size-on-disk calculations are currently performed using an assumed 4 KB block size.
3. Access and Modify time stamps for directories are not consistently defined across file system types. These time stamps should only be considered for file entries.
4. Directory or Folder Quotas for Windows NTFS volumes are only available on Windows 2008 R2 and later servers, and only if the File Server Resource Manager (FSRM) Role has been installed.

D.3 Security Scans — Active Directory File Systems

Table D-4 *Permission Scan Capabilities for Active Directory Environments*

Windows Component	Supported	Notes
Share Permissions	✔	

Windows Component	Supported	Notes
Security Descriptors	✔	Includes the ACLs and ACEs, owner, and all ACE and security descriptor flags. However, only security descriptors for folders are currently collected. Additionally, deny ACEs are not factored into calculations for Permission by Identity or Permission by Path reports.
Universal Security Groups	✔	
Global Security Groups	✔	
Local Security Groups	✘	The local security groups themselves are collected, but group memberships for local security groups are not currently processed.
Nested Group Memberships	✔	Nested group membership is collected as a flat list of all intermediate and leaf groups, users, and other security principals. The hierarchy of group nesting is not currently preserved.
Primary Groups	✔	
Local Security Authority (LSA) Privileges	✘	LSA privileges are not currently collected.

D.4 Security Scans — eDirectory File Systems

Table D-5

Novell Component	Supported	Notes
Trustees	✔	Only trustees for directories are currently collected.
Inherited Rights Masks (IRMs)	ⓘ	These are fully scanned and collected, but reporting does not calculate them for Permissions by Path or Permissions by Identity reports.
Security Equivalence	✔	For calculation of effective rights, security equivalence is collected for all objects that are direct trustees of any file system folder entry, as well as implicit trustees.
Rights Inherited from eDirectory	✔	All users in eDirectory that have Write or Supervisor access to the server object automatically have Supervisor rights to all volumes on that server.
eDirectory Inherited Rights Filters (IRFs)	✘	IRFs are not currently collected nor reported.

D.5 Volume Free Space Scans

- Free space for NSS volumes is currently calculated as volume free space + purgeable space.
- Used space for NSS volumes is currently calculated as total size – calculated free space. This means that the volume compressed size is included along with actual space used.

- For NSS volumes that are oversubscribed on a shared NSS Pool, the volume total size of each volume in the pool will change as data is added or removed from other volumes in the pool. This is known behavior for oversubscribed volumes.

  Oversubscribed NSS volumes are defined as two or more NSS volumes that are set to grow to the size of a shared NSS Pool.

D.6 Other Microsoft Supported Features

- Multiple domains in a single forest
- Distribute File System (DFS) running in domain-based mode

D.7 Current Limitations

The following are scan limitations of Novell File Reporter 2.6:

- Microsoft Environments
  - No scanning for workstations
  - No scanning for standalone servers
  - No support for Distributed File System (DFS) in standalone mode
  - No support for Single Label Domains
  - No support for FAT or FAT32 file systems
  - No support for Trusted Forests
- Novell Environments
  - NetWare Traditional File System (TFS) volumes are not supported.

E Glossary

Baseline Scan: A scan that you save as a reference for a comparison with another scan via a Historical Comparison report. You can have one File System Baseline scan and one Permissions Baseline scan for each storage resource.

Built-in Reports: With the exception of Custom Query reports, all of the report types that you can generate through the options displayed on the Add Report Definition page.

Current Scan: The most recent scan of a storage resource.

Custom Query Report: Custom reports generated through SQL commands to the database. Custom Query Reports can be generated both from the Novell File Reporter browser-based administrative interface and from the Report Designer client tool.

DeployAgents Tool: A tool that is used for remotely installing and configuring NFR Agents.

Historic Comparison Report: File system or permissions reports that specify the differences between two similar scan types of the same target system. Historic Comparison reports can compare Baseline scans to Previous scans, Baseline scans to Current scans, and Previous scans to Current scans.

Identity System: Refers to the supported directory services, which are eDirectory and Active Directory. Novell File Reporter can report on storage resources that reside in either identity system.

NFR Agent: Compact programs that can run on Novell Open Enterprise Server and Microsoft Windows Server hosts. NFR Agents can examine and report on Novell NSS and Windows NTFS file systems. Additionally, NFR Agents examine and report on file system security, including folder rights, trustee assignments, and permissions.

NFR Engine: The component that runs Novell File Reporter. It can be hosted on a Microsoft Windows Server 2008 R2 or 2012.

The NFR Engine does the following:

- Stores scans in the database
- Schedules the scans that the NFR Agents conduct
- Processes the scans and compiles them for inclusion in a report
- Provides the report information to the user interface
- Determines that a condition has been met to start a triggered report
- Runs scheduled reports
- Monitors how many agents are online
- Sends notifications that Novell File Reporter has completed a scan or generated a report

Novell Storage Manager: A network file management system that utilizes directory services enacted policies to automatically manage user and group network storage. When installed and configured in the same network, Novell File Reporter can report on Novell Storage Manager policies.

PostgreSQL Database: One of the supported databases developed by the PostgreSQL Global Development Group. Novell File Reporter includes a version of PostgreSQL that you can choose to install.

Preview Report: A report generated through the *Generate Preview* option. Might also be referred to as “viewing the report in Preview mode.”

Previous Scan: When the *Retain existing Previous scan* option is selected in the Scan Policy Editor, the status of the Current scan becomes the Previous scan. You can then use the Previous scan as a reference for a Historic Comparison report. There is only one File System Previous scan and one Permissions Previous scan for each storage resource.

Proxy Agent: An NFR Agent that performs agent services on a storage resource through a proxy association. NAS devices, clustered configurations, and NetWare servers require proxy agents.

Proxy Target: Servers, clusters, and NAS devices that are not hosting an NFR agent but are being scanned through a proxy agent.

Report: The result of a report request specified through the report definition. Reports are first presented on-screen in either Preview or Stored mode. You can save reports in a number of different formats.

Scan: Comprehensive file information pertaining to a storage resource at a specific time. Information from scans is the means of generating reports.

Scan Policy: Specifies how and where the scan is conducted. All scans are managed through a scan policy.

Scan Target: The storage resource on the network that can be scanned by Novell File Reporter.

SQL Server: One of the supported databases developed and distributed by Microsoft. Novell File Reporter supports SQL Server 2012.

Storage resource: A resource within the network environment that Novell File Reporter monitors and reports on. Depending on the environment in which Novell File Reporter is deployed, a storage resource can be a server volume, a Windows server share, a Novell Storage Manager policy, or a network folder path.

Stored Report: A report that is stored in the `Reports` folder of the NFR Engine. By default, a stored report is only stored for 30 days, but this setting can be adjusted through the Stored Reports Configuration page.

Unformatted Report: Report data generated as “raw” text rather than formatted and presented in a formatted report. In some instances, having an unformatted report might be useful for doing extensive sorting and filtering of the report data through a product such as Microsoft Excel.

Web Application: The Novell File Reporter administrative interface that runs on top of Microsoft IIS.

F Documentation Updates

This section contains information about documentation content changes that were made in this *Novell File Reporter 2.6 Administration Guide* after the initial release of Novell File Reporter 2.0. The changes are listed according to the date they were published.

The documentation for this product is provided on the Web in two formats: HTML and PDF. The HTML and PDF documentation are both kept up-to-date with the changes listed in this section.

If you need to know whether a copy of the PDF documentation that you are using is the most recent, the PDF document includes a publication date on the title page.

The documentation was updated on the following dates:

F.1 August 5, 2015

Updates were made to the following sections:

Location	Update Description
Section 2.3.3, “NFR Agents,” on page 15.	Removed information on support for NetWare Traditional file system support.
Table D-3 on page 138.	Removed information on support for NetWare Traditional file system support.
Section D.7, “Current Limitations,” on page 140.	Removed information on support for NetWare Traditional file system support.
Appendix E, “Glossary,” on page 141.	Removed information on support for NetWare Traditional file system support.

F.2 April 27, 2015

Updates were made to the following sections:

Location	Update Description
Section 5.1.1, “Scan Retention,” on page 40.	New section.
Section 5.4, “Creating Scan Policies,” on page 42.	Information on Previous scans.
Section 5.5, “Establishing a Baseline Scan,” on page 46.	New section.
Section 5.6, “Clearing a Baseline Scan,” on page 47.	New section.
Section 6.7, “Historic Comparison Reports,” on page 79.	New section.
Section 6.15, “Copying a Report Definition,” on page 91.	New section.

Location	Update Description
Appendix E, “Glossary,” on page 141.	New entries.

F.3 October 7, 2014

Updates were made to the following sections:

Location	Update Description
“Custom Queries” on page 18.	New section.
Section 5.14, “Retrying Failed Scans,” on page 50.	New section.
Section 6.9, “Custom Query Reports,” on page 85.	New section.
Chapter 8, “Using the Client Tools,” on page 99.	New section.
Chapter 9, “Data Analytic Tools,” on page 115.	New section.

F.4 February 18, 2014

Updates were made to the following sections:

Location	Update Description
Various.	Updated references to database references to include information specific to Microsoft SQL Server 2012.
Section 7.3, “Considerations for Reporting on NAS Devices,” on page 94.	Updated this section to include new procedures for EMC Isilon and other NAS devices.
Section 7.7, “Changing the Report Data Font,” on page 96.	Expanded this section.
Appendix D, “NFR Agent Scan Capabilities,” on page 137.	New section.

F.5 November 26, 2013

Updates were made to the following sections:

Location	Update Description
Section 7.7, “Changing the Report Data Font,” on page 96.	New section.

F.6 April 25, 2013

Updates were made to the following sections:

Location	Update Description
Section 3.3.2, “Configuring the Web Interface,” on page 24.	New procedures.
Appendix A, “Filtering,” on page 125.	New section.
Appendix B, “Security Settings,” on page 131.	New section.
Appendix C, “Log File Locations,” on page 135.	New section.

F.7 February 13, 2013

Updates were made to the following sections:

Location	Update Description
Section 3.1, “Supported Browsers,” on page 21.	Removed Internet Explorer 8 from the list of supported browsers.
Section 5.4, “Creating Scan Policies,” on page 42.	Specified that a target path cannot be included in more than one scan policy of the same type.
Section 6.6.1, “Generating a Filename Extension Report,” on page 71.	Inserted a note on the maximum length of file extensions.